

Commercial Feeding-Stuffs

Maryland Farmers spent at least \$5,000,000 for feeds in 1923. This is much larger than the bill for fertilizer, larger than the bill for farm implements, and exceeds any single item charged against the farm business other than that of labor, and the time of the farmer himself. The protection of feed buyers in the expenditure of this tremendous sum is of great importance.

It is to this task that feed inspection is devoted, and this bulletin is published in order that feed buyers may have accurate information regarding feeds bought from May 1, 1923, to January 1, 1924

STATE FEED DEPARTMENT

Controlled by

UNIVERSITY OF MARYLAND

COLLEGE PARK, MD.

Entered at College Park (Md.) Post-Office as Second-Class Matter.

COMMERCIAL FEEDING-STUFFS

MAY 1, 1923—JANUARY 1, 1924.

Compiled and edited under the supervision and direction of N. E. Gordon,
State Chemist, and L. E. Bopst, Chemist in Charge of Feed,
Fertilizer and Lime Departments.

BOARD OF REGENTS — UNIVERSITY OF MARYLAND

SAMUEL M. SHOEMAKER, <i>Chairman</i>	1916-1925
Eccleston, Baltimore County.	
ROBERT CRAIN.....	1924-1933
Mt. Victoria, Charles County.	
JOHN M. DENNIS, <i>Treasurer</i>	1925-1932
Union Trust Company, Baltimore.	
DR. FRANK GOODNOW.....	1922-1931
6 W. Madison Street, Baltimore.	
JOHN E. RAINE.....	1921-1930
413 E. Baltimore Street, Baltimore.	
CHARLES C. GELDER.....	1920-1929
Princess Anne, Somerset County.	
DR. W. W. SKINNER, <i>Secretary</i>	1919-1928
Kensington, Montgomery County.	
B. JOHN BLACK.....	1918-1927
Roslyn, Baltimore County.	
HENRY HOLZAPFEL.....	1917-1926
Hagerstown, Washington County.	
DR. ALBERT F. WOODS.....	<i>Executive Officer and President of University.</i>

STATE FEED, FERTILIZER AND LIME DEPARTMENTS.

N. E. GORDON, Ph. D., <i>State Chemist.</i>
L. E. BOPST, B. S., <i>Chemist in Charge of Feeds, Fertilizer and Lime.</i>
L. H. VANWORMER, M. S., <i>First Assistant Chemist.</i>
A. L. FLENNER, B. S., <i>Assistant Chemist.</i>
H. R. WALLS, <i>Assistant Chemist.</i>
E. C. DONALDSON, M. S., <i>Assistant Chemist.</i>
F. R. DAKIS, M. S., <i>Assistant Chemist.</i>
O. H. REINMUTH, B. S., <i>Assistant Chemist.</i>

The inspection, analysis and control work of the fertilizer and feed trade is carried on by the State Department, but the State Department is so related to the chemical work of the University that the other men of the Chemical Staff who are mentioned below may be called on for help in time of need; and, furthermore, it is the purpose of the majority of this Chemical Staff to be carrying on some investigations which bear directly or indirectly on the properties of feeds, fertilizers and lime.

CHEMICAL STAFF.

N. E. GORDON, Ph.D., *Head of Chemistry Department.*

Physical Chemistry.

M. R. HARING, Ph.D., <i>Asst. Professor</i>
E. G. VAN DEN BOSCHE, B. S., <i>Asst.</i>

Industrial Chemistry.

L. B. BROUGHTON, M. S., <i>Professor.</i>
J. H. GARDNER, Ph.D., <i>Asst. Professor.</i>
J. D. SCHEUCH, M. S., <i>Assistant.</i>

Organic Chemistry.

M. KHARASCH, Ph.D., <i>Asso. Professor.</i>
M. GRAFFLIN, B. S., <i>Assistant.</i>

Inorganic Chemistry.

E. B. STARKEY, M. S., <i>Instructor</i>
D. LICHTENWALNER, M. S., <i>Instructor.</i>
J. W. ELDER, B. S., <i>Assistant.</i>

Analytical Chemistry.

R. C. WILEY, M. S., <i>Associate Professor.</i>

INTRODUCTION

The Feed Inspection Work, performed from May 1, 1923—January 1, 1924, and conducted in accordance with the Law regulating the sale of commercial feeding stuffs, consisted in the registration of the brands to be offered for sale, the inspection of methods of labelling and selling, the collection and analysis of official samples to establish the fact that the contents of the containers substantially meet the guarantys printed on the outside, the analysis of special samples submitted by residents of the State and the prosecution of those dealers or selling agents, where violations were found to have occurred.

To establish the correctness of the Feed manufacturer's guaranty, the State Feed Department collected from May 1, 1923, to January 1, 1924, 929 samples of commercial feeds, covered by approximately 1050 licenses. The samples were selected from dealers and selling agents in nearly every town and city in Maryland. Of the 929 samples secured, 173 were either evidence samples, or from shipments previously analyzed. The remaining 756 samples were subjected to a complete analysis and the results compared with the guaranty of the manufacturer. Individual reports were made to the dealer, manufacturer, and, when possible, the consumer.

COMMERCIAL FEEDING STUFFS.

Feed is one of the most important single items which the Maryland Farmer has to buy, and the consumption of proprietary feeds in 1923 exceeded that of 1922. The purchase of these feeds represents an outlay of at least \$5,000,000. The protection of feed buyers in the expenditure of this tremendous sum is of great importance. It is to this task that feed inspection is devoted. The Feed Law compels the manufacturer to sell a product on its merits, but it cannot compel a farmer to buy any special kind of feed.

The value of feeding stuffs is determined to a large extent by their chemical analysis. In order that the purchaser may be able to determine the value of a feeding stuff, the State Law requires that these commodities be labeled with a guaranteed analysis. The analysis of the majority of feeds sold in this State are given in this publication.

READ IT AND PROTECT YOURSELF.

To the Consumer.

As stated in our Publication, No. 100, May 1923, the Maryland Feed Stuff Law exists largely for the protection of the buyers of feed-stuffs, yet those in charge of the enforcement of THIS LAW expect the users of feed to cooperate to the extent, at least, of not buying feed that is improperly tagged, for such a commodity is very often of inferior grade.

We have had considerable trouble with manufacturers selling their feed in second-hand bags upon which there is no information whatsoever. This practice is unlawful and must be stopped. Buyers of feed are sure to discriminate in favor of the manufacturers who correctly label their products. Study the guaranteed analysis and the list of ingredients given on the sack, and use this information as a guide in the selection of feed that suits your particular need. It is to be regretted that many of the buyers are guided more by the price of a feed than the analysis and ingredients. The buyers should bear in mind the fact that the per unit cost of the nutritive elements is always less in high grade feeds than in low grades, and that high grade feeds are always the cheapest in the long run.

TO SELLING AGENTS.

Before engaging in the sale of feeding-stuffs, write for a copy of THE LAW and acquaint yourself with its provisions.

Consult our reports and represent only such companies as have a good record of inspection.

In order that brokers and dealers may have information relative to feeds that are registered, copies of all feeds that may be legitimately marketed in our State are furnished upon request and these copies are supplemented every 15 days with additional registrations as they are received.

Keep in mind at all times that the same penalty attaches to exposing or offering unlabeled feed for sale as for selling the same, and that the local dealer is directly responsible for feed in his possession failing to meet the Requirements of THE LAW. This is a point that is not entirely clear to Maryland Feed men. This opportunity is taken to stress the fact that we are functioning under a State Law whose jurisdiction is confined to the boundaries of our Commonwealth. Therefore, protect yourself by specifying on all out of State orders that manufacturers comply with the State Law in every respect. If at any time you are in doubt regarding a manufacturer or feeding stuff, write for information. This Department is always ready to advise you.

TO MANUFACTURERS.

Each brand of feed must be registered with the State Feed Department, preferably upon blank registration forms furnished by this Department. The uniform application blank adopted by the Association of Feed Control Officials may be used when making application for the registration of commercial feeding stuffs.

We wish to impress upon feed manufacturers that it is not our desire to see how many prosecutions we can instigate in the Feed Industry, but it shall always be our purpose to carry on a constructive Control, in order that the sale of good products may be pro-

moted, and we shall cause as little interference with the feed industry as is consistent with the enforcement of our Law.

OPERATION OF THE LAW.

The majority of the feeds sold in Maryland have been marketed in compliance with the Law. We have encountered numerous minor violations relative to tagging, etc., which were corrected by manufacturers upon notification. We have found 65 feeds offered for sale which were not registered with our Department. This has resulted in the withdrawal of these feeds from sale until registration Requirements were satisfied.

Working in conjunction with the Federal Food and Drug Officials, as pertaining to feeds, we have turned over for their prosecution 25 violations of this Law. This has resulted upon several occasions in the seizure of the consignment on hand in the dealers warehouse, and in the other instances in a fine for the manufacturer responsible for the shipment into our State, and in this way the consumers of feed in our State have been protected.

All feeds found to be seriously deficient in guaranty were removed from sale, and the manufacturer compelled to either replace the shipment with feed up to the guaranty, or else relabel the feed with a correct guaranty. Where deficient feed had already been sold, refunds were in most cases made to the dealers, and by the dealers to the consumers. Within the last year over \$1,000 has been refunded Maryland dealers and consumers for deficient feeds. Feed is considered seriously deficient as regards chemical analysis when it is either one per cent. or more deficient in crude protein, or .5% or more deficient in crude fat.

The ingredients of the feed must also be correctly stated on the label. The feed mixture may be good or practically worthless, depending on the kind of ingredients used.

SOME DISHONEST PRACTICES.

Investigation into the manufacture and sale of feed stuffs for the past year brings to light many illegitimate practices. These vary in the manner and degree of the fraud practiced upon the consumer. It seems that whenever there is a rise in demand for a certain type of feed or a fluctuation in price these practices increase.

FRAUD IN THE USE OF OAT FEED.

Oat feed, sometimes called Reground Oat Feed, was bought by certain Maryland farmers last year under the supposition that the material was ground oats. Upon inspection, this feed proved to be a roughage, consisting largely of oat hulls and is obtained as a by-product in the manufacture of rolled oats, or oatmeal. Oat feed is similar to timothy hay in composition, containing about the same amount of protein and digestible nutrients.

Manufacturers were also found using oat feed as an ingredient in a product they were selling as Corn and Oat Chop. This practice was immediately stopped until the manufacturers took steps to correctly brand their product as Corn and Reground Oat Feed (Oat Hulls, Oat Shorts).

FRAUD IN THE SALE OF ALFALFA.

Another typical example of an illegitimate practice is found in the alfalfa meal industry, and also in the preparation of alfalfa by some manufacturers to be used in their mixed feeds. Alfalfa hay is usually ground to a certain degree of fineness and then passed over screens which remove the finer and more brittle portions, consisting almost entirely of leaves which are sold as alfalfa flour, or alfalfa leaf meal, etc. The coarser portion remaining consisting almost entirely of stems, is sold as alfalfa meal.

Alfalfa flour, or alfalfa leaf meal, is a better product and is used in hog and poultry feeds, while the alfalfa meal serves as an ingredient in horse and dairy feeds. We have found certain cases of this form of misbranding and adulteration in Maryland this year. The product was labeled meal, and instead of being the whole ground alfalfa hay, consisted almost entirely of alfalfa stems and straw.

FRAUD IN THE USE OF DYE IN HORSE FEEDS WHEN SUCH PRACTICES ARE NOT STATED.

The State Feed Department first brought to the attention of the Association of Feed Control Officials, the fact that green coloring material was being used to color alfalfa meal in molasses horse feeds. Owing to the fact that cane molasses has a tendency to give alfalfa a brownish coloration, manufacturers have attempted to counteract this action by adding a green dye to their feeds. Also this practice may conceal inferiority when a low grade alfalfa meal of poor color is used. The dye in this case may make the resultant feed really look better than the original product. Our investigation established the fact that this dye is not harmful, hence, the Department has not prohibited its use, provided its presence is declared upon the container or attached card.

ILLEGITIMATE USE OF INFERIOR GRAINS.

A very common practice is the use of inferior grains in mixed feeds. Grains of a damaged nature containing an admixture of weed seeds are often used as "first class grains." They may be more or less decomposed or immature. Examples of this may sometimes be found in mixed feeds where corn is used, the corn being damaged or unsound. When oats are declared, we have found them to be of the kind known as "pin" and wild oats. Wheat may

oftimes consist of immature, damaged and broken grains. The term grain screenings may be used to cover a multitude of sins for they serve to cover up the identity of the grains present, and yet be within the Law as near as possible.

The use of degerminated cracked corn is not objected to as an ingredient in scratch feeds, provided that manufacturers make this statement when applying for registration, and so mark their containers.

SUBSTITUTION OF GROUND WHEAT BRAN FOR MIDDINGS.

Another typical example of misbranding and adulteration is the substitution of ground wheat bran for middlings. Ground weed seeds may also be found in these products covered by the term "screenings." This form of adulteration is governed to a large extent by the market price for wheat bran and wheat middlings. When market conditions justify such practices, it is the duty of feed control officials to exercise a sharp watch for these materials. As a means towards breaking up this form of adulteration, this Department has adopted chemical standards for wheat by-product feeds, and will accept no registrations unless the offered guarantys come within the standards which are given below.

TENTATIVE STANDARDS FOR WHEAT MILL FEEDS.

With or Without Screenings.

	Fiber (Max.)
Standard Middlings	9.5%
Flour Middlings	6.0%
Red Dog Flour	4.0%
Brown Shorts	6.5%
Gray Shorts	5.5%
White Shorts	3.5%
Wheat Mixed Feed	8.5%

EXPLANATION OF TERMS USED IN ANALYSIS.

MOISTURE.

Moisture is present to some extent in the dryest feeds. When present in excess, water constitutes a filler in concentrated feeds and very often affects their keeping qualities. The changes in moisture content are very important in connection with sampling and analysis.

CRUDE FAT.

Crude Fat includes all the substances which dissolve in dry ether. In a feed it consists principally of oils and fats, but may also contain small amount of waxes and the green coloring matter of

plants. The fat in a feed is two-fold in its functions in that it may be utilized directly to produce animal fat, and at the same time act as a producer of heat and energy in the animal body.

CRUDE PROTEIN.

Crude Protein is the term employed to designate all the compounds of feeding-stuffs containing nitrogenous matter. Protein is of the greatest importance in a feed stuff, for it is utilized in building up the muscular tissues and is a constituent of the hair, hoofs, horns and other nitrogenous parts of the animal body.

CRUDE FIBER.

Crude Fiber is the essential constituent of the walls of the vegetable cells which go to make up the structure of all plants, and as nearly all feed stuffs are derived from vegetable sources, it naturally follows that all feed stuffs contain more or less fiber. Usually only a small percentage of the fiber in a feed is easily digested, hence, a feed of high fiber content is of low feeding value and is not to be desired.

ASH.

Ash is a mineral portion of the feed which remains after the feed is burned. These mineral constituents, which are usually furnished by natural feeding-stuffs are essential to the process of nutrition of the animal body as well as an absolute necessity for the building of bone.

NITROGEN FREE EXTRACT.

Nitrogen Free Extract includes all the rest of the dry matter of a feeding-stuff after the ash, crude protein, crude fat, crude fiber and moisture have been removed. It embraces all sugars, starches and pentosans, etc., which may be determined separately.

CARBOHYDRATES.

Carbohydrates are the sum of the Nitrogen Free Extract and the fiber. Since carbohydrates include the fiber or the woody indigestible part of the feed, one must remember that high fiber means low quality while low fiber usually means high quality.

STANDARDS ADOPTED.

The Maryland Feed Stuff Law gives the State Chemist the power to refuse the registration of any feeding-stuff under a name which would be misleading as to the materials of which it is made, or which does not conform to the standards adopted. If a feeding-stuff is registered and then discovered to be in violation of the Standards, the State Chemist has the power to cancel such registration.

Feeding-stuffs cannot be sold under names that are false or misleading. Should the manufacturer desire to use a name not included in the following list, it would be advisable for him to communicate with the State Feed Department before making application for registration.

The Definitions of the Feed Control Officials given below, of which there are approximately 90, are used as our Standards and are adhered to very closely when a feed is offered for registration, and are also a great help when establishing the adulteration of certain feeding materials.

DEFINITIONS OF FEEDING-STUFFS.

Meal is the clean, sound, ground product of the entire grain, cereal or seed which it purports to represent.

Chop is a ground or chopped feed composed of one or more different cereals or by-products thereof. If it bears a name descriptive of the kind of cereals, it must be made exclusively of the entire grains of those cereals.

Ear Corn Chops is corn and cob, chopped, without the husk, with not a greater proportion of cob than occurs in the ear corn in its natural state.

Head Chops consist of the entire head of the grain sorghums, chopped, and should bear the name of the sorghum from which it is made. This includes, among others, kafir head chops, milo head chops, feterita head chops, and sorghum head chops.

Head Stems consist of the head of the grain sorghums, from which the grain has been removed, and should bear the name of the sorghum from which it is made.

Chopped Alfalfa is the entire alfalfa hay, chopped and not ground finely enough to become a meal. It must not contain an admixture of alfalfa straw or other foreign material.

Alfalfa meal is the entire alfalfa hay ground and does not contain an admixture of ground alfalfa straw or other foreign materials.

ANIMAL PRODUCTS.

Blood Meal is ground dried blood.

Cracklings are the residue after partially extracting the fats and oils from the animal tissues. If they bear a name descriptive of their kind, composition or origin, they must correspond thereto.

Digester Tankage is the residue from animal tissues, exclusive of hoof and horn, specially prepared for feeding purposes by tanking under live steam, drying under high heat, and suitable grinding, and contains less than 10 per cent. phosphoric acid (P_2O_5).

Digester Meat and Bone Tankage is the residue from animal tissues, exclusive of hoof and horn, specially prepared for feeding purposes by tanking under live steam, drying under high heat, and suitable grinding, and contains more than 10 per cent. phosphoric acid (P_2O_5).

Meat Scrap and Meat Meal are the ground residues from animal tissues, exclusive of hoof and horn, and contains less than 10 per cent. phosphoric acid (P_2O_5). If they bear a name descriptive of their kind, composition or origin, they must correspond thereto.

Meat and Bone Scrap and Meat and Bone Meal are the ground residues from animal tissues, exclusive of hoof and horn, and contain more than 10 per cent. phosphoric acid (P_2O_5). If they bear a name descriptive of their kind, composition or origin, they must correspond thereto.

BARLEY PRODUCTS.

Barley Hulls are the outer coverings of the barley.

Barley Feed is the entire by-product resulting from the manufacture of pearl barley from clean barley.

Barley Mixed Feed is the entire offal from the milling of barley flour from clean barley and is composed of barley hulls and barley middlings.

Ground Barley is the entire product obtained by grinding clean sound barley, containing not less than 90 per cent. pure barley and not more than 10 per cent. of other grains, weed seeds and other foreign material and not more than 6 per cent. fiber. Provided that no portion of this stated 10 per cent. of other grains, weed seeds or other foreign material shall be deliberately added.

Mixed Feed Barley is the entire product obtained by grinding country run barley containing not less than 75 per cent. pure barley and not more than 25 per cent. of other grains, weed seeds and other foreign material. Provided that no portion of this stated 25 per cent. of other grains, weed seeds or foreign material shall be deliberately added. The ingredients must be stated as barley, other grains, weed seeds and other foreign material.

BREWERS' AND DISTILLERS' PRODUCTS.

Brewers' Dried Grains are the properly dried residue from cereals obtained in the manufacture of beer.

Distillers' Dried Grains are the dried residue from cereals obtained in the manufacture of alcohol and distilled liquors. The products shall bear the designation indicating the cereal predominating.

Distillers' Corn Solubles, a by-product from the manufacture of alcohol from corn, is a mash liquor concentrated after the removal of the alcohol and wet grains.

Distillers' Corn and Rye Solubles, a by-product from the manufacture of alcohol from corn and rye, is a mash liquor concentrated after the removal of the alcohol and wet grains.

Distillers' Rye Solubles, a by-product from the manufacture of alcohol from rye, is a mash liquor concentrated after the removal of the alcohol and wet grains.

Malt Sprouts are the sprouts of the barley grain obtained in the malting process. Sprouts derived from any other malted cereal must be designated by the name of that cereal.

BUCKWHEAT PRODUCTS.

Buckwheat Shorts or Buckwheat Middlings are that portion of the buckwheat grain immediately inside of the hull after separation from the flour.

CORN PRODUCTS.

Corn Bran is the outer coating of the corn kernel.

Corn Feed Meal is the by-product obtained in the manufacture of cracked corn, with or without aspiration products added to the siftings. This name is also correctly applied to the by-product obtained in the manufacture of table meal from the whole grain by the non-degerminating process.

Corn Germ Cake is the product obtained in the manufacture of starch, glucose and other corn products and consists of the germ from which part of the corn oil has been extracted.

Corn Germ Meal is ground corn germ cake.

Grits are the hard, flinty portions of Indian corn containing no bran or germ.

Corn Gluten Meal is that part of commercial shelled corn that remains after the separation of the larger part of the starch, the germ and the bran, by the processes employed in the manufacture of cornstarch and glucose. It may or may not contain corn solubles.

Corn Gluten Feed is that portion of commercial shelled corn that remains after the separation of the larger part of the starch and the germs by the processes employed in the manufacture of cornstarch and glucose. It may or may not contain corn solubles.

Maltose Process Corn Gluten Feed is the dried residue from degermed corn, after removal of starch in the manufacture of malt syrup.

Hominy Feed, Hominy Meal or Hominy Chop is the kiln-dried mixture of the mill run bran coating, the mill run germ, with or without a partial extraction of the oil and a part of the starchy portion of the white corn kernel obtained in the manufacture of hominy, hominy grits and corn meal by the degerminating process.

Yellow Hominy Feed, Yellow Hominy Meal or Yellow Hominy Chop is a kiln-dried mixture of the mill-run bran coating, the mill-run germ, with or without a partial extraction of the oil and a part of the starchy portion of the yellow corn kernel obtained in the manufacture of yellow hominy grits and yellow corn meal by the degerminating process.

OIL CAKE.

Oil Cake is the product obtained after the extraction of part of the oil by crushing, cooking and hydraulic pressure, or by crushing, heating and the use of solvents from seeds which have been screened and cleaned of weed seeds and other foreign materials by the most improved commercial processes. When used alone the term "Oil Cake" shall be understood to designate linseed cake as defined. When used to cover any other product the name of the seed from which it is obtained shall be prefixed to the word "Oil Cake."

Oil Meal or Ground Oil Cake is oil cake ground to a meal.

COTTONSEED PRODUCTS.

Cottonseed Meal is a product of the cottonseed only, composed principally of the kernel with such portion of the hull as is necessary in the manufacture of oil; provided that nothing shall be recognized as cottonseed meal that does not conform to the foregoing definition and that does not contain at least 36 per cent. of protein.

41.12 Per Cent. Protein Cottonseed Meal, Choice Quality, must be finely ground, not necessarily bolted, perfectly sound and sweet in odor, yellow, free from excess of lint, and must contain at least 41.12 per cent. crude protein, equivalent to 8 per cent. of ammonia.

Cottonseed Meal not fulfilling the above requirements as to color, odor or texture, shall be branded Off Quality.

38.56 Per Cent. Protein Cottonseed Meal, Prime Quality, must be finely ground, not necessarily bolted, of sweet odor, reasonably bright in color, yellow, not brown or reddish, free from excess of lint, and must contain at least 38.56 per cent. crude protein equivalent to 7½ per cent. of ammonia.

Cottonseed Meal not fulfilling the above requirements as to color, odor or texture, shall be branded Off Quality.

36 Per Cent. Protein Cottonseed Meal, Good Quality, must be finely ground, not necessarily bolted, of sweet odor, reasonably bright in color, free from excess lint and must contain at least 36 per cent. crude protein equivalent to 7 per cent. of ammonia.

Cottonseed Meal not fulfilling the above requirements as to color, odor or texture, shall be branded Off Quality.

Cottonseed Feed is a mixture of cottonseed meal and cottonseed hulls, containing less than 36 per cent. of protein.

Cold Pressed Cottonseed is the product obtained from the subsection of the whole undecorticated cottonseed to the cold pressure process for the extraction of oil and includes the entire cottonseed less the oil extracted.

Ground Cold Pressed Cottonseed is the product obtained by grinding cold pressed cottonseed.

LINSEED AND FLAX PRODUCTS.

Linseed Cake or Meal is oil cake or meal made from flaxseed, provided that the final product shall contain less than 6 per cent. of weed seeds and other foreign materials and, provided, further that no portion of the stated 6 per cent. of weed seeds and other foreign materials shall be deliberately added.

Old Process Oil Meal, Old Process Linseed Meal is oil meal as defined or linseed meal as defined produced by crushing, cooking and hydraulic pressure.

New Process Oil Meal, New Process Linseed Meal is oil meal as defined or linseed meal as defined produced by crushing, heating and the use of solvents.

Flax Plant By-Products is that portion of the flax plant remaining after the separation of the seed, the bast fiber and a portion of the shives, and consists of flax shives, flax pods, broken and immature flax seeds, and the cortical tissues of the stem.

Ground Flaxseed or Flaxseed Meal is the product obtained by grinding flaxseed which has been screened and cleaned of weed seeds and other foreign materials by the most improved commercial processes, provided that the final product shall contain less than four per cent. of weed seeds and other foreign materials, and provided further that no portion of the stated four per cent. of weed seeds and other foreign materials shall be deliberately added.

Unscreened Flaxseed Oil Feed Cake is the product obtained by extraction of part of the oil from unscreened flaxseed by crushing, cooking and hydraulic pressure, or by crushing, heating and the use of solvents. The ingredients shall be stated as partially extracted flaxseed and foreign seeds (wheat, wild buckwheat, pigeon grass, wild-mustard, etc.)

Ground Unscreened Flaxseed Oil Feed is the ground unscreened flaxseed oil feed cake.

Screenings Oil Feed is the ground product obtained after extraction of part of the oil by crushing, cooking and hydraulic pressure, or by crushing, heating and the use of solvents from the smaller imperfect grains, weed seeds and other foreign materials, having feeding value, separated in cleaning the grain. The name of the grain from which the screenings are separated shall be prefixed to "screenings oil feed."

OAT PRODUCTS.

Oat Groats are the kernels of the oat.

Oat Hulls are the outer coverings of the oat.

Oat Middlings are the floury portions of the oat groat obtained in the milling of rolled oats.

Oat Shorts are the covering of the oat grain lying immediately inside the hull, being a fuzzy material carrying with it considerable portions of the fine floury part of the groat obtained in the milling of rolled oats.

Clipped Oat By-Product is the by-product obtained in the manufacture of clipped oats. It may contain the light chaffy material broken from the end of the hulls, empty hulls, light, immature oats and dust. It must not contain an excessive amount of oat hulls.

PEANUT PRODUCTS.

Peanut Oil Cake is the residue after the extraction of part of the oil by pressure or solvents from peanut kernels.

Peanut Oil Meal is ground peanut oil cake.

Unhulled Peanut Oil Feed is the ground residue obtained after extraction of part of the oil from whole peanuts, and the ingredients shall be designated as "Peanut Meal and Hulls."

RICE PRODUCTS.

Rice Bran is the pericarp or bran layer of the rice, with only such quantity of hull fragments as is unavoidable in the regular milling of rice.

Rice Hulls are the outer coverings of the rice.

Rice Polish is the finely powdered material obtained in polishing the kernel.

RYE PRODUCTS.

Rye Middlings or Rye Feed is the by-product obtained from the manufacture of ordinary "100 per cent." rye flour from cleaned and scoured rye grain.

Rye Red Dog is a mixture of low-grade flour, fine particles of bran and the fibrous offal from the "tail of the mill."

VELVET BEAN PRODUCTS.

Velvet Bean Meal is ground velvet beans containing only an unavoidable trace of hull or pods.

Ground Velvet Bean and Pod is the product derived by grinding velvet beans "in the pod." It contains no additional pods or other materials.

WHEAT PRODUCTS.

Wheat Bran is the coarse outer covering of the wheat kernel as separated from cleaned and scoured wheat in the usual process of commercial milling.

Standard Millings consists mostly of fine particles of bran, germ and very little of the fibrous offal obtained from the "tail of the mill." This product must be obtained in the usual commercial

process of milling and shall not contain more than 9.5 per cent. crude fiber.

Flour Middlings shall consist of standard middlings and red dog flour combined in the proportions obtained in the usual process of milling and shall not contain more than 6.0 per cent. crude fiber.

Red Dog Flour consists of a mixture of low-grade flour, fine particles of bran and the fibrous offal from the "tail of the mill" and shall not contain more than 4.0 per cent. crude fiber.

Brown Shorts (Red Shorts) consists mostly of the fine particles of bran, germ and very little of the fibrous offal obtained from the "tail of the mill." This product must be obtained in the usual commercial process of milling.

Gray Shorts (Gray Middlings or Total Shorts) consists of the fine particles of the outer bran, the inner bran or bee-wing bran, the germ and the offal or fibrous materials obtained from the "tail of the mill." This product must be obtained in the usual process of commercial milling.

White Shorts or White Middlings consist of a small portion of the fine bran particles and the germ and a large portion of the fibrous offal obtained from the "tail of the mill." This product must be obtained in the usual process of flour milling.

Wheat Mixed Feed (Mill Run Wheat Feed) consists of pure wheat bran and the gray or total shorts of flour middlings combined in the proportions obtained in the usual process of commercial millings.

Wheat Bran and Standard Middlings consists of the two commodities as defined above, mixed in the proportions obtained in the usual process of commercial milling.

Screenings consists of the smaller imperfect grains, weed seeds and other foreign materials, having feeding value, separated in cleaning the grain.

Scourings consist of such portions of the cuticle, brush, white-caps, dust, smut and other materials as are separated from the grain in the usual commercial process of scouring.

NOTE.—If to any of the wheat or rye by-product feeds there should be added screenings or scourings—as above defined, either ground or unground, bolted or unbolted, such brand shall be so registered, labeled and sold as clearly to indicate this fact.

The word "Screenings" or "Scourings" as the case may be, shall appear as a part of the name or brand and shall be printed in the same size and face of type as the remainder of the brand name. When the word "Screenings" appears it is not necessary to show also on the labeling the word "Scourings."

MISCELLANEOUS PRODUCTS.

Dried Beet Pulp is the dried residue from sugar beets which have been cleaned and freed from crowns, leaves and sand, and which have been extracted in the process of manufacturing sugar.

Cocoanut Oil Meal or "*Copra Oil Meal*" is the ground residue from the extraction of part of the oil from the dried meat of the cocoanut.

Fish Residue Meal is the clean undecomposed residue from the manufacture of glue or other fishery products from non-oily fish.

Ivory Nut Meal is ground ivory nuts.

Palm Kernel Oil Meal is the ground residue from the extraction of part of the oil by pressure or solvents from the kernel of the fruit of *Elaeis guineensis* or *Elaeis malanococca*.

Yeast or Vinegar Dried Grains are the properly dried residue from the mixture of cereals, malt and malt sprouts (sometimes cottonseed meal) obtained in the manufacture of yeast or vinegar, and consists of corn or corn and rye from which most of the starch has been extracted, together with malt added during the manufacturing process to change the starch to sugars, and malt sprouts (sometimes cottonseed meal) added during the manufacturing process to aid in filtering the residue from the wort and serve as a source of food supply for the yeast.

TABLES.

The following pages contain a detailed report of the results obtained in the inspection of feeds from May 1, 1923, to January 1, 1924. Consumers and agents are advised to study carefully this table and purchase from and represent companies which ship feed labeled according to Law and who maintain their guarantees in every respect.

The results are given in percentage or pounds in a hundred.

* One star means deficient in Protein or Fat.

FEED STUFF ANALYSIS

21

Place Collected	Moisture	Protein		Fat		Fiber		Ash	Nitrogen Free Extract
		FOUND	Guaranteed	FOUND	Guaranteed	FOUND	Guaranteed		
Centreville	12.08	15.27	14.50	4.45	3.50	10.93	11.00	7.36	49.91
Ridgely	7.35	23.50	24.00	5.28	5.00	9.05	9.00	6.52	48.30
Chestertown ...	12.70	24.14	24.00	4.34	5.00	8.95	9.00	6.12	43.75
College Park ...	10.35	24.70	24.00	4.76	5.00	8.18	9.00	6.75	45.26
College Park ...	10.73	20.36	20.00	4.29	4.50	8.65	9.00	7.09	48.88
Baltimore	9.50	21.76	20.00	4.25	4.50	8.35	9.00	7.20	48.94
Ridgely	10.53	21.37	22.00	3.98	3.50	6.58	7.00	6.69	50.85
Preston	6.75	32.42	32.00	5.54	5.00	7.15	9.00	8.41	39.73
College Park ...	8.53	32.47	32.00	5.00	5.00	6.75	9.00	7.22	40.03
Baltimore	10.20	10.18	10.00	2.96	2.00	6.83	12.00	3.48	66.35
Baltimore	13.03	9.39	9.00	2.85	3.50	2.23	5.00	1.26	71.24
Baltimore	10.88	20.01	20.00	4.93	4.00	7.00	9.00	6.06	51.12
Baltimore	13.30	10.18	8.00	3.03	2.50	3.00	5.00	1.91	68.58
Chestertown ...	12.93	14.04	15.00	4.35	4.00	10.90	9.50	7.20	50.58
Chestertown ...	12.05	14.74	16.00	4.70	4.00	6.63	8.00	4.31	57.57
Baltimore	8.55	51.07	55.00	13.33	10.00	2.65	.....	24.40	0.00
Silver Springs..	8.85	40.89	41.18	6.90	7.00	10.23	10.00	5.70	27.43
Thurmont	8.50	40.28	38.62	7.20	6.00	9.43	11.50	6.91	27.68
Taneytown	11.10	37.38	34.00	5.65	5.00	7.58	8.00	4.91	33.38
Baltimore	5.93	25.80	23.00	2.35	1.50	7.38	8.50	4.41	54.13
Mt. Lake Park..	10.25	30.36	30.00	6.23	5.00	9.40	10.00	5.72	38.04
Silver Springs..	10.23	30.71	30.00	5.83	5.00	8.93	10.00	5.88	38.42
Baltimore	9.58	24.31	24.00	5.25	4.50	9.28	10.00	8.06	43.52
Queen Anne....	9.30	19.46	20.00	4.70	4.50	9.45	9.00	5.50	51.59
Baltimore	11.63	19.97	18.00	4.50	4.00	6.43	8.00	8.68	48.79
Bel Air	11.93	20.36	20.00	3.90	4.00	3.79	5.00	4.18	55.84
Baltimore	12.78	10.18	10.00	2.27	2.50	1.65	5.00	1.44	71.68
Queen Anne....	10.45	16.27	16.50	4.64	3.50	10.92	12.00	7.80	49.92
Ridgely	11.08	18.46	18.00	4.25	4.00	4.10	5.00	6.45	55.66
Baltimore	11.93	10.53	10.00	3.80	2.50	2.25	5.00	1.73	69.76
Baltimore	12.95	10.18	10.00	2.78	2.50	1.88	5.00	1.88	70.33
Baltimore	11.85	10.27	10.00	3.18	2.50	2.98	5.00	1.50	70.22
Greensboro	10.60	16.42	16.50	4.07	3.50	11.80	10.00	6.42	50.69
Greensboro	9.45	18.34	20.00	4.16	4.00	13.15	12.00	6.75	48.15
Baltimore	11.42	9.77	9.00	3.42	3.00	6.77	10.00	3.08	65.47
Baltimore	11.35	9.92	9.00	2.92	3.00	6.21	10.00	2.98	66.62
Lutherville	12.95	10.79	10.00	2.70	2.50	2.00	5.00	1.88	69.68
Baltimore	12.15	10.53	8.50	4.28	3.00	3.85	8.00	1.93	67.26
Reisterstown ..	9.95	17.93	20.00	5.26	4.00	10.82	12.00	8.42	47.62
Lutherville	8.53	11.41	10.00	2.63	3.50	4.83	7.50	2.79	69.81
Reisterstown ..	9.68	16.70	16.00	4.65	3.50	12.20	12.00	8.65	48.12
Reisterstown ..	11.72	10.71	10.00	2.15	2.50	1.95	5.00	1.35	72.12
Lutherville	8.50	20.01	18.00	4.48	4.50	7.80	7.50	6.64	52.57
Reisterstown ..	11.55	24.04	24.00	5.33	5.00	8.15	10.00	6.85	44.08
Reisterstown ..	.....	10.00	10.00	1.20	2.50	2.95	5.00	1.25	.....
Reisterstown ..	.....	10.62	10.00	3.00	2.50	2.15	5.00	1.43	.....
Lutherville	8.70	11.77	9.00	3.38	2.50	9.65	12.00	4.02	62.48
Baltimore	12.25	11.41	10.00	3.85	2.50	2.75	5.00	1.30	68.56

Name of Feed	Name of Manufacturer
Wonder Chick Starter with B. M.	Arcady Farms Milling Co., Chicago, Ill.—Con
Wonderfat Shipping Feed.	" " " " " " " " " " " "
* Wonder Mash with B. M.	" " " " " " " " " " " "
Old Process Ground Oil Cake.	Archer-Daniels Linseed Co., Buffalo, N. Y. .
Old Process Ground Oil Cake.	" " " " " " " " " " " "
Old Process Ground Oil Cake.	" " " " " " " " " " " "
Old Process Ground Oil Cake.	" " " " " " " " " " " "
Oat Middlings Shorts and Hulls.	Armour Grain Co., Chicago, Ill.
Helmet Brand Prime Cottonseed Meal. .	Ashcraft-Wilkinson Co., Atlanta, Ga.
* Monarch Brand Prime Cottonseed Meal. .	Ashcraft-Wilkinson Co., Atlanta, Ga.
Paramount Brand Good Cottonseed Meal. .	Ashcraft-Wilkinson Co., Atlanta, Ga.
* Laurel Brand Scratch Feed.	Athey & Harrison Milling Co., Laurel, Md. .
Wheat Bran, with Screenings, N. Ex. M. R.	Atkinson Milling Co., Minneapolis, Minn. .
Wheat Bran, with Screenings, N. Ex. M. R.	Atkinson Milling Co., Minneapolis, Minn. .
* Dried Brewers Grains.	Atlantic Export Co., New York, N. Y.
* Dried Brewers Grains.	Atlantic Export Co., New York, N. Y.
C-Em-Grow Growing Mash.	J. J. Badenock, Chicago, Ill.
Egg A Day Dry Mash.	J. J. Badenock, Chicago, Ill.
BBL Brand Beef Scrap.	Baltimore Feed & Seed Co., Balto., Md. .
BBL Brand Beef Scrap.	" " " " " " " " " " " "
BBL Brand Baby Chick Feed.	" " " " " " " " " " " "
BBL Brand Buttermilk Chick Starter. .	" " " " " " " " " " " "
BBL Brand Buttermilk Growing Mash. .	" " " " " " " " " " " "
BBL Brand Buttermilk Growing Mash. .	" " " " " " " " " " " "
BBL Brand Buttermilk Growing Mash. .	" " " " " " " " " " " "
BBL Brand Buttermilk Laying Mash.	" " " " " " " " " " " "
BBL Brand Buttermilk Laying Mash.	" " " " " " " " " " " "
BBL Brand Buttermilk Laying Mash.	" " " " " " " " " " " "
BBL Brand Chick Developer.	" " " " " " " " " " " "
BBL Brand 20% Dairy Feed.	" " " " " " " " " " " "
BBL Brand Dry Mash.	" " " " " " " " " " " "
BBL Brand Dry Mash.	" " " " " " " " " " " "
BBL Brand Meat Meal.	" " " " " " " " " " " "
BBL Brand Meat Meal.	" " " " " " " " " " " "
* BBL Brand Meat Scrap.	" " " " " " " " " " " "
* BBL Brand Selected Beef Scraps.	" " " " " " " " " " " "
BBL Brand Scratch Feed.	" " " " " " " " " " " "
BBL Brand Scratch Feed.	" " " " " " " " " " " "
BBL Brand Victory Scratch.	" " " " " " " " " " " "
BBL Brand Victory Scratch.	" " " " " " " " " " " "
* Hercules Brand Buttermilk Laying Mash. .	" " " " " " " " " " " "
* Hercules Brand Buttermilk Laying Mash. .	" " " " " " " " " " " "
Pure Wheat Bran Flakes.	Barber Milling Co., Minneapolis, Minn.
Wheat Middlings, with G. S., N. E. M. R. .	Barber Milling Co., Minneapolis, Minn.
Wheat Middlings.	Bay State Milling Co., Winona, Minn.
	P'd by Green Mish Co., Wash., D. C.
Lay More Scratch Feed.	Belair Road Supply Co., Balto., Md.
Lay More Scratch Feed.	Belair Road Supply Co., Balto., Md.
Bran.	G. T. Bell & Son, Federalsburg, Md.

* One star means deficient in Protein or Fat.

** Two stars mean deficient in both Protein and Fat.

Luther
 Baltimore
 Baltimore
 Smithst
 Provide
 Baltimore
 German
 Sparks
 Emmits
 Hurlock
 Baltimore
 Laurel
 Baltimore
 Baltimore
 Rising
 Rising
 Cumber
 Cumber
 Baltimore
 Baltimore
 Baltimore
 Preston
 Baltimore
 Baltimore
 Preston
 Baltimore
 Salisbur
 Baltimore
 Fullert
 Baltimore
 Baltimore
 Baltimore
 Baltimore
 Baltimore
 Baltimore
 Baltimore
 Baltimore
 Baltimore
 Baltimore
 Baltimore
 Baltimore
 Salisbur
 Baltimore
 Baltimore
 Baltimore
 Oakland
 Oakland
 Laurel
 Baltimore
 Raspebu
 Federal

FEED STUFF ANALYSIS

23

Place Collected	Moisture	Protein		Fat		Fiber		Ash	Nitrogen Free Extract
		FOUND	Guaranteed	FOUND	Guaranteed	FOUND	Guaranteed		
—Cont.									
Lutherville	6.35	19.88	13.00	4.18	3.50	4.78	5.00	9.93	54.88
Baltimore	10.65	15.36	12.50	4.63	4.50	6.05	7.00	3.11	60.20
Baltimore	11.05	18.21	20.00	4.70	4.50	7.18	8.00	6.16	36.74
Smithsburg	9.00	31.50	32.00	8.15	5.00	8.45	10.00	6.55	37.32
Providence	8.68	32.47	32.00	6.83	5.00	8.15	10.00	5.90	37.95
Baltimore	6.58	34.62	31.00	6.80	5.00	8.15	10.00	6.13	36.47
Germantown	11.20	31.20	31.00	6.50	5.00	8.50	10.00	3.65	63.34
Sparks	5.30	16.41	15.00	5.10	5.00	6.20	10.00	7.21	27.53
Emmitsburg	8.00	40.33	40.00	6.70	6.00	10.23	10.00	6.94	26.36
Hurlock	3.34	40.33	43.00	6.68	6.00	12.70	10.00	2.50	69.69
Baltimore	7.60	35.19	36.00	6.98	5.50	16.93	14.00	6.08	53.31
Laurel	12.23	9.57	10.50	3.03	4.00	2.98	4.00	5.74	53.55
Baltimore	8.70	15.71	13.00	5.55	4.00	10.65	13.00	6.99	53.53
Baltimore	11.90	14.65	13.00	5.03	4.00	9.13	13.00	10.15	43.72
Rising Sun	8.73	21.94	25.00	5.45	6.00	14.05	14.00	11.62	59.59
Rising Sun	9.40	22.60	25.00	6.45	6.00	13.60	14.00	25.73	47.47
Cumberland	11.30	17.90	18.00	3.63	4.00	6.65	8.00	1.78	69.95
Cumberland	11.05	21.77	20.00	4.23	4.00	9.08	11.00	6.86	53.07
Baltimore	6.30	55.36	55.00	22.15	8.00	3.98	3.00	6.06	50.85
Baltimore	6.08	51.69	50.00	12.53	5.70	3.50	3.00	6.34	52.22
Baltimore	11.70	10.97	11.00	3.35	3.00	2.25	4.50	7.62	48.15
Preston	11.53	15.80	14.00	6.13	4.50	6.61	5.00	6.17	49.59
Baltimore	10.10	19.22	18.00	5.40	3.50	8.37	9.00	7.34	50.42
Baltimore	8.63	20.36	18.00	4.35	3.50	8.10	9.00	6.20	48.73
Preston	11.35	21.90	18.00	4.10	3.50	6.88	9.00	1.75	67.99
Baltimore	9.40	21.06	20.00	5.08	4.00	8.70	9.00	4.86	48.54
Salisbury	10.70	19.66	20.00	5.00	4.00	6.88	9.00	7.14	45.71
Baltimore	10.83	20.01	20.00	4.48	4.00	9.75	9.00	6.34	49.85
Fullerton	13.20	10.53	11.00	4.03	3.00	2.50	4.50	4.90	54.27
Baltimore	9.10	20.97	20.00	5.68	4.50	10.85	10.00	4.54	53.16
Baltimore	10.80	22.12	18.00	4.05	4.00	10.18	9.00	1.54	69.32
Baltimore	9.78	20.23	18.00	5.10	4.00	8.70	9.00	1.64	68.87
Baltimore	8.65	81.08	80.00	8.48	7.00	1.08	2.00	6.63	54.88
Baltimore	8.65	81.85	80.00	7.95	7.00	1.20	2.00	3.11	60.20
Baltimore	6.65	52.74	55.00	14.20	8.00	1.80	3.00	6.16	36.74
Baltimore	7.40	52.68	55.00	17.90	8.00	1.65	3.00	6.55	37.32
Baltimore	10.75	10.53	10.50	3.02	2.75	2.65	3.00	5.90	37.95
Baltimore	12.43	11.06	10.50	3.10	2.75	3.15	3.00	6.13	36.47
Baltimore	12.20	11.14	10.00	3.48	3.00	3.23	5.00	3.65	63.34
Salisbury	12.80	11.14	10.00	2.77	3.00	2.33	5.00	7.21	27.53
Baltimore	11.90	18.78	20.00	5.05	4.00	7.37	9.00	6.94	26.36
Baltimore	10.00	18.91	20.00	4.03	4.00	7.33	9.00	2.50	69.69
Oakland	13.30	14.74	14.50	4.80	4.00	9.30	11.60	6.08	53.31
Oakland	12.65	15.18	14.00	5.20	4.00	8.20	9.50	5.74	53.55
Laurel	10.70	17.55	17.60	5.95	5.10	8.10	8.20	6.99	53.53
Baltimore	13.55	10.18	10.00	2.98	3.00	2.43	4.00	10.15	43.72
Raspeburg	13.62	10.09	10.00	3.05	3.00	2.73	4.00	11.62	59.59
Federalburg	14.57	14.00	4.65	4.00	9.05	9.00	6.63	25.73	47.47

1923—Complete Analyses of Feeds Collected—1923—Continued.

Name of Feed	Name of Manufacturer
Middlings	G. T. Bell & Son, Federalsburg, Md.—Cont...
50% Protein Poultry Meat & Bone Scraps	Berg Co., Inc., Philadelphia, Pa.....
3 Medal Poultry Meat & Bone Scraps.....	Berg Co., Inc., Philadelphia, Pa.....
Flour Middlings	Berlin Milling Co., Salisbury, Md.....
Pure Wheat Bran.....	Berlin Milling Co., Salisbury, Md.....
Wheat Bran, with Screenings, N. E. M. R....	Bernet Craft & Kauffman Milling Co., St. Louis, Mo.
*Atlas Wheat Flour Midds., with Ground Screenings, N. Ex. M. R.....	Bernhard Stern & Sons, Inc., Milwaukee, Wis.
Wheat Flour Midds., W. G. S., N. E. M. R.	Big Diamond Mills Co., Minneapolis, Minn...
Cornell Brand Beef Scraps.....	Blamberg Bros., Inc., Balto., Md.....
Cornell Brand Buttermilk Chick Starter...	" " " " " "
Cornell Brand Buttermilk Growing Feed...	" " " " " "
Cornell Brand Buttermilk Laying Mash...	" " " " " "
Cornell Brand Buttermilk Laying Mash...	" " " " " "
*Cornell Brand Chick Developer.....	" " " " " "
Cornell Brand Chick Developer.....	" " " " " "
*Cornell Brand Chick Feed.....	" " " " " "
Cornell Brand Dairy Feed.....	" " " " " "
Cornell Brand Dairy Feed.....	" " " " " "
Cornell Brand Developing Mash.....	" " " " " "
Cornell Brand Developing Mash.....	" " " " " "
Cornell Brand Dry Mash.....	" " " " " "
Cornell Brand Dry Mash.....	" " " " " "
Cornell Brand Hog Feed.....	" " " " " "
*Cornell Brand Hog Feed.....	" " " " " "
*Cornell Brand No. 2 Pigeon.....	" " " " " "
*Cornell Brand No. 2 Pigeon.....	" " " " " "
*Cornell Brand No. 3 Pigeon.....	" " " " " "
Cornell Brand No. 3 Pigeon.....	" " " " " "
Cornell Brand No. 4 Pigeon.....	" " " " " "
Cornell Brand Scratch.....	" " " " " "
Cornell Brand Scratch.....	" " " " " "
*H. W. R. Egg Mash.....	" " " " " "
Pig Meal	Blatchford Calf Meal Co., Waukegan, Ill.....
*Good Luck Meat Meal.....	F. W. Bolgiano & Co., Inc., Wash., D. C.....
Square Deal Baby Chick Feed.....	J. Bolgiano Seed Co., Balto., Md.....
Square Deal Buttermilk Growing Mash...	" " " " " "
Square Deal Buttermilk Laying Mash.....	" " " " " "
Square Deal Buttermilk Starting Feed.....	" " " " " "
*Square Deal Ground Beef Scrap for Poultry	" " " " " "
Square Deal Scratch Feed.....	" " " " " "
Sensation Scratch	Boyer & Heard, Hagerstown, Md.....
*Superior Mash	Boyer & Heard, Hagerstown, Md.....
Pure Wheat Bran.....	Bowman Bros., Germantown, Md.....
Pure Wheat Bran.....	Bowman Bros., Germantown, Md.....
Owl Brand Cottonseed Meal.....	F. W. Brode Corp., Memphis, Tenn.....
*Owl Brand Cottonseed Meal.....	F. W. Brode Corp., Memphis, Tenn.....
*Capital Meat & Bone Scraps.....	Brown Co., Inc., New York, N. Y.....
*Home Made Brand Dairy.....	Calvary Roller Mills, Bel Air, Md.....

* One star means deficient in Protein or Fat.

Pr
Col

Federal
Elkton
Rising
Salisbury
Salisbury
Linwood

Rising 3
Gaithersburg
Baltimore
Baltimore
Baltimore
Baltimore
Baltimore
Catonsville
Pikesville
Baltimore
Baltimore
Baltimore
Baltimore
Baltimore
Baltimore
Baltimore
Baltimore
Baltimore
Baltimore
Baltimore
Baltimore
Baltimore
Baltimore
Sandy Spring
Baltimore
Baltimore
Baltimore
Baltimore
Baltimore
Hagerstown
Hagerstown
Dickerson
Germantown
Germantown
Baltimore
Bel Air

FEED STUFF ANALYSIS

25

Place Collected	Moisture	Protein		Fat		Fiber		Ash	Nitrogen Free Extract
		FOUND	Guaranteed	FOUND	Guaranteed	FOUND	Guaranteed		
Cont... Federalsburg ...	...	16.23	15.00	4.95	4.00	4.45	6.00	4.26	...
Elkton	7.77	54.32	50.00	10.43	11.00	1.73	2.00	24.96	.79
Rising Sun	8.35	50.90	45.00	12.35	11.00	2.20	3.00	25.02	1.18
Salisbury	13.40	14.74	14.50	3.65	4.00	3.65	5.00	3.59	60.97
Salisbury	11.63	15.18	14.00	4.35	4.00	9.58	11.00	6.97	52.29
uis, Mo. Linwood	12.95	14.04	14.50	3.85	4.00	9.85	9.50	7.45	51.86
Rising Sun	11.55	14.92	16.00	4.38	4.00	7.77	6.00	4.18	57.20
Gaithersburg ..	10.80	17.55	16.50	4.60	5.00	6.68	6.00	5.19	55.18
Baltimore	6.33	55.81	55.00	13.55	13.00	2.65	3.00	21.30	.36
Baltimore	10.30	13.95	12.05	5.35	3.05	6.05	7.00	4.80	59.55
Baltimore	11.70	19.40	17.25	4.45	3.50	8.48	8.50	6.70	49.27
Baltimore	9.53	21.67	20.00	5.20	4.00	8.83	9.00	8.70	46.07
Baltimore	10.90	21.50	20.00	5.13	4.00	8.33	9.00	7.05	47.09
Baltimore	11.90	10.53	10.70	2.45	3.50	2.00	3.50	1.46	71.66
Catonsville	13.65	10.40	10.70	3.75	3.50	2.00	3.50	1.56	68.64
Pikesville	...	11.14	10.70	2.73	3.50	2.00	3.50	1.73	...
Baltimore	8.05	21.50	20.00	5.78	5.00	8.93	10.00	4.90	50.84
Baltimore	11.60	20.09	20.00	5.53	5.00	5.63	10.00	4.50	52.65
Baltimore	9.15	21.90	18.50	4.95	4.50	9.93	9.00	7.72	46.37
Baltimore	11.95	18.43	18.50	4.38	4.50	10.95	9.00	6.68	47.61
Baltimore	9.20	19.70	18.50	4.75	4.50	6.35	9.00	8.50	51.50
Baltimore	10.78	21.28	18.50	5.33	4.50	8.65	9.00	7.84	46.12
Baltimore	8.70	17.90	17.00	5.83	5.00	10.10	8.50	8.53	48.94
Baltimore	11.68	14.04	17.00	5.00	5.00	8.70	8.50	5.50	55.08
Baltimore	11.45	14.31	16.00	2.80	3.00	3.43	4.00	2.28	65.73
Baltimore	12.60	15.23	16.00	2.40	3.00	3.45	4.00	1.94	64.38
Baltimore	12.50	14.13	16.00	4.03	3.00	4.13	4.00	1.95	63.26
Baltimore	11.43	15.41	16.00	3.20	3.00	3.83	4.00	2.27	63.86
Baltimore	11.33	14.83	14.00	3.23	2.60	3.75	4.30	2.37	64.49
Baltimore	9.93	10.44	10.50	3.20	3.50	2.70	4.00	1.38	72.35
Baltimore	11.75	10.62	10.50	3.05	3.50	2.55	4.00	1.52	70.51
Baltimore	10.53	22.42	25.00	5.05	5.00	13.25	8.00	11.04	37.71
Baltimore	8.50	19.13	18.00	5.05	5.00	6.65	7.00	8.92	51.75
Sandy Springs..	6.95	50.68	55.00	12.15	10.00	1.73	2.00	...	...
Baltimore	13.60	9.65	9.00	3.30	2.00	2.45	5.00	1.82	69.18
Baltimore	9.75	18.25	18.00	5.75	4.00	6.83	10.00	9.30	50.12
Baltimore	11.80	18.43	18.00	5.00	4.00	5.50	10.00	5.95	53.32
Baltimore	9.95	14.22	12.50	4.18	4.00	3.35	4.50	4.08	64.22
Baltimore	9.23	53.27	55.00	12.45	11.00	2.00	3.00	23.00	.05
Baltimore	14.28	10.09	10.00	3.00	2.00	2.30	5.00	1.43	68.90
Hagerstown	15.10	10.18	10.00	2.35	2.50	2.68	5.00	1.51	68.18
Hagerstown	10.93	25.36	25.40	4.90	5.41	6.20	7.04	5.93	46.68
Dickerson	10.10	14.74	13.50	4.40	3.00	9.00	9.00	6.09	55.67
Germantown	12.50	14.83	13.50	4.40	3.00	9.50	9.00	6.42	52.35
Germantown	6.80	41.24	41.00	6.93	6.00	9.20	10.00	7.65	28.18
Germantown	5.68	39.71	41.00	6.38	6.00	11.63	10.00	6.73	29.87
Baltimore	7.33	40.63	40.00	8.88	10.00	1.45	5.00	36.44	5.27
Bel Air	10.05	17.64	20.00	4.68	4.50	5.07	10.00	6.74	55.82

1923—Complete Analyses of Feeds Collected—1923—Continued.

Name of Feed	Name of Manufacturer	P. Col.
New-Vim Dairy Feed.....	Cambridge Mfg. Co., Cambridge, Md.....	Hurlock
New-Vim Dairy Feed.....	" " " " " ".....	Trappe
New-Vim Dairy Feed.....	" " " " " ".....	Cambridge
New-Vim Growing Feed.....	" " " " " ".....	Hurlock
New-Vim Growing Feed.....	" " " " " ".....	Cambridge
New-Vim Hog Feed.....	" " " " " ".....	Cambridge
New-Vim Laying Mash.....	" " " " " ".....	Hurlock
New-Vim Laying Mash.....	" " " " " ".....	Cambridge
New-Vim Scratch Feed.....	" " " " " ".....	Cambridge
Good Cotton Seed Meal.....	Cameron Daniel Co., Atlanta, Ga.....	Preston
Good Cotton Seed Meal.....	P'd by Matthews-Howard Co., La Plata, Md.	
Pure Wheat Bran.....	Cameron Daniel Co., Atlanta, Ga.....	La Plata
Wheat Flour Middlings, with Ground Screenings, N. E. M. R.	Cannon Valley Milling Co., Minneapolis, Minn.	Bel Air
St. Paul Queen.....	Cannon Valley Milling Co., Minneapolis, Minn.	Bel Air
"Gro-All" Fish Meal.....	Capital City Milling & Grain Co., St. Paul, Minn...	Thurmond
"Gro-All" Hog & Poultry Tankage.....	P'd by M. F. Baringer, Phila., Pa.	
Honey Boy Horse Sweet Feed.....	Central Chemical Co., Hagerstown, Md.....	Hagerstown
*Bran.....	Central Chemical Co., Hagerstown, Md.....	Emmits
*Middlings.....	Central Feed Co., Balto., Md.....	Baltimore
Ajax Dairy Ration.....	Centreville Milling Co., Centreville, Md.....	Centreville
Bicorn Pig Meal.....	Centreville Milling Co., Centreville, Md.....	Centreville
Centaur Feed.....	Chapin & Co., Chicago, Ill.....	Baltimore
Ova Egg Mash with BM.....	" " " " " ".....	Baltimore
Ova Scratch Feed.....	" " " " " ".....	Baltimore
Unicorn Dairy Ration.....	" " " " " ".....	Hurlock
Bay Brand Fish Meal.....	Chesapeake Plant & Animal Food Co., Balto., Md.	Massey
Middlings.....	Church Hill Milling Co., Church Hill, Md....	Sykesville
Wheat Bran.....	Church Hill Milling Co., Church Hill, Md....	Church
*Advanced Registry Dairy Feed.....	Clover Leaf Milling Co., Buffalo, N. Y.....	Church
Advanced Registry Dairy Feed.....	" " " " " ".....	Hurlock
Big 4 Horse Feed.....	" " " " " ".....	Baltimore
Cloverdale Horse Feed.....	" " " " " ".....	New W
*Cloverdale Milk Grains.....	" " " " " ".....	Baltimore
Egg Mash.....	" " " " " ".....	Hurlock
Growing Mash, with BM.....	" " " " " ".....	Baltimore
*Growing Mash, with BM.....	" " " " " ".....	Baltimore
Master Baby Chick Feed.....	" " " " " ".....	Baltimore
Master Developing Feed.....	" " " " " ".....	Baltimore
Master Scratch Grains.....	" " " " " ".....	Baltimore
Old Colony Feed "The Ready Ration for Dairy Cows".....	" " " " " ".....	Baltimore
Scratch Feed Grains.....	" " " " " ".....	Baltimore
Stock Feed.....	" " " " " ".....	Linwood
Sweet 16% Dairy Feed.....	" " " " " ".....	Baltimore
Process Pure Dried Buttermilk.....	Collis Product Co., Clinton, Iowa.....	Baltimore
Flaked Corn and Oats.....	Colton Bros. Co., Bellefontaine, Ohio.....	Baltimore

* One star means deficient in Protein or Fat.

** Two stars mean deficient in both Protein and Fat.

FEED STUFF ANALYSIS

27

Place Collected	Moisture	Protein		Fat		Fiber		Ash	Nitrogen Free Extract
		FOUND	Guaranteed	FOUND	Guaranteed	FOUND	Guaranteed		
Hurlock	9.65	24.83	24.00	5.45	4.00	10.45	10.00	8.00	41.62
Trappe	8.83	23.69	22.00	5.78	4.00	7.68	12.00	5.95	48.07
Cambridge	9.50	24.75	24.00	5.40	4.00	10.35	10.00	8.63	41.37
Hurlock	10.65	18.78	16.00	4.75	3.00	6.90	10.00	7.09	51.83
Cambridge	10.75	17.84	16.00	4.75	3.00	8.45	10.00	7.20	51.01
Cambridge	11.43	13.34	12.00	4.55	3.00	4.30	10.00	4.38	61.80
Hurlock	10.47	21.32	20.00	5.65	3.00	8.20	10.00	8.01	46.35
Cambridge	10.15	22.11	20.00	6.00	3.00	7.83	10.00	8.00	45.91
Cambridge	11.58	9.48	9.00	3.05	2.00	2.80	5.00	2.69	70.40
Preston	8.80	38.31	36.00	6.60	5.50	13.68	14.00	5.47	27.14
La Plata	9.13	35.72	36.00	6.43	5.50	13.00	14.00	6.23	29.43
Bel Air	11.92	13.86	14.50	5.45	4.00	10.35	12.00	5.65	52.77
Bel Air	12.12	16.15	16.00	5.80	5.00	6.40	6.00	3.98	55.55
Thurmont	11.75	15.97	15.70	4.80	4.60	7.00	8.30	3.44	57.04
Hagerstown ...	9.08	55.55	55.00	7.15	6.00	6.67	1.00	18.52	3.03
Emmitsburg ...	6.00	59.33	50.00	13.13	10.00	3.80	6.00	12.50	5.24
Baltimore	9.82	7.72	8.00	2.62	2.00	9.47	20.00	5.17	65.20
Centreville ...	12.95	13.65	14.83	3.35	4.55	10.08	9.60	7.07	52.90
Centreville ...	12.73	14.70	16.58	3.78	3.65	4.00	4.55	3.38	61.41
Baltimore	9.75	20.53	20.00	5.78	5.00	8.50	9.00	7.16	48.28
Baltimore	8.95	20.50	17.50	6.53	4.00	5.00	6.00	8.95	50.07
Baltimore	10.03	12.81	12.00	5.08	4.00	8.30	8.00	4.52	59.26
Baltimore	9.25	22.51	20.00	5.68	4.50	5.80	7.00	9.39	47.37
Hurlock	12.05	10.62	10.00	3.15	2.50	3.10	5.00	2.54	68.54
Massey	9.90	24.48	24.00	5.53	4.00	7.73	10.00	8.20	44.16
Sykesville	8.80	66.39	57.00	7.10	6.00	2.60	1.00	15.04	.07
Church Hill ...	12.95	14.30	14.00	4.20	4.00	6.88	7.00	....	....
Church Hill ...	11.68	13.16	13.50	3.28	3.25	9.35	9.50	....	....
Hurlock	9.85	23.78	25.00	5.35	5.00	9.25	10.00	6.27	45.50
Baltimore	9.60	24.57	25.00	5.35	5.00	8.43	10.00	6.70	45.35
New Windsor..	9.55	9.27	8.00	3.13	2.00	7.33	12.00	5.74	64.98
Baltimore	11.28	9.83	9.00	3.57	2.50	5.78	11.00	2.95	66.59
Hurlock	8.30	21.31	24.00	4.63	4.50	17.70	10.00	5.97	42.05
Baltimore	11.15	19.83	20.00	5.43	4.00	6.78	11.00	7.35	49.46
Baltimore	9.53	16.50	17.00	4.95	4.00	7.50	6.00	7.70	53.82
Baltimore	10.65	15.36	17.00	4.50	4.00	6.63	6.00	7.70	49.76
Baltimore	11.65	10.71	10.00	2.60	2.50	1.63	5.00	1.70	71.71
Baltimore	11.70	10.00	10.00	2.45	2.50	1.45	5.00	1.26	73.14
Baltimore	11.55	11.14	10.00	2.60	2.50	2.65	5.00	2.37	69.69
Baltimore	10.00	20.45	20.00	4.55	3.50	8.80	12.00	5.23	50.97
Baltimore	12.65	10.18	10.00	2.70	2.50	2.83	5.00	1.67	69.97
Linwood	10.60	9.04	9.00	3.38	3.50	6.99	12.00	4.69	65.30
Baltimore	7.75	18.92	16.00	4.90	4.00	12.15	12.00	8.10	48.18
Baltimore	11.70	30.63	30.00	5.93	5.50	....	....	....	....
Baltimore	11.63	9.92	10.00	4.13	4.00	4.56	9.00	2.00	67.76

* One star means deficient in Protein or Fat.

** Two stars mean deficient in both Protein and Fat.

Baltin
Laure
Baltin
Hager
Baltin
Ridge
Hager
Baltin
Prest
Baltin
Owing
Baltin
New
Color
Cumb
Baltin
Cumb
Cumb
Cumb
Laure
Pocon

Baltin
Berlin
Pocon
Pocon
Hager
Baltin
Baltin
Baltin
Baltin
Baltin
Baltin
Hebro
Hebro
Hebro
Hebro
Easton
Easton
Baltin
Linwo
Federa
Federa
Fallsto
Westm
Westm
Denton
Fallsto
Bel A

Place Collected	Moisture	Protein		Fat		Fiber		Ash	Nitrogen Free Extract	
		FOUND	Guaranteed	FOUND	Guaranteed	FOUND	Guaranteed			
Minn...	Baltimore	11.25	18.08	18.00	5.28	4.00	3.73	4.00	3.68	57.98
Minn...	Laurel	11.20	16.58	16.50	4.78	5.00	6.35	6.00	4.60	56.49
	Baltimore	11.05	18.43	18.00	4.15	4.00	4.73	5.00	10.57	51.07
	Hagerstown ...	8.08	21.85	20.00	5.30	4.00	4.88	6.00	10.83	49.06
	Baltimore	11.00	19.13	20.00	4.63	4.00	5.30	6.00	9.08	50.86
	Ridgely	9.63	13.43	12.00	4.95	3.00	3.35	4.00	6.37	62.27
	Hagerstown ...	11.63	11.06	10.50	2.40	2.50	1.80	3.00	2.72	70.39
	Baltimore	12.83	10.79	9.75	2.38	1.75	3.33	3.00	1.89	68.78
Pa...	Preston	6.55	48.45	45.00	11.80	10.00	1.55	2.00	31.04	.61
k, N. Y.	Baltimore	10.93	25.58	23.00	2.53	1.00	8.15	8.50	6.38	46.43
k, N. Y.	Owings Mills ..	12.20	44.19	40.00	1.43	1.00	1.90	4.00	1.92	38.36
	Baltimore	8.85	14.30	14.00	5.65	5.50	3.65	3.00	3.45	64.10
	New Windsor...	10.05	50.90	50.00	5.15	5.00	4.00	5.00	29.64	.26
	Colora	8.95	35.80	36.00	5.75	6.00	13.45	14.00	...	...
	Cumberland ...	12.25	10.45	10.00	3.03	2.50	3.60	8.50	...	...
mar, Col.	Baltimore	8.13	16.10	12.00	2.00	1.00	24.95	35.00	10.25	38.57
	Cumberland ...	11.90	21.32	20.00	5.20	4.00	8.30	10.00	6.34	46.94
	Cumberland ...	11.80	24.39	24.00	4.90	5.50	8.50	10.00	6.08	44.33
	Cumberland ...	11.50	19.40	20.00	5.45	5.00	7.15	10.00	8.18	48.32
	Laurel	11.40	16.28	14.00	4.00	4.00	8.95	11.00	6.73	52.64
	Pocomoke	13.50	9.32	10.00	2.97	2.50	6.10	12.00	2.40	64.11
n, Minn.	Baltimore	11.70	16.67	16.00	5.08	4.00	4.60	6.00	3.60	58.35
Minn.	Berlin	...	52.00	50.00	12.40	10.00	2.50	2.00	26.30	...
	Pocomoke	11.63	15.45	15.00	4.45	4.00	6.40	9.00	5.51	56.56
	Pocomoke	12.43	13.34	15.00	2.20	4.00	1.70	5.00	1.71	68.62
n...	Hagerstown ...	14.55	18.08	16.50	4.45	4.50	2.70	3.50	3.70	56.52
n...	Baltimore	12.80	15.18	14.00	5.13	4.00	9.68	12.00	5.72	51.49
	Baltimore	8.95	10.42	10.00	3.20	3.00	6.77	12.00	3.37	67.29
	Baltimore	8.63	55.72	57.00	7.65	8.00	1.00	.75	22.05	4.94
	Baltimore	5.90	41.38	41.00	9.28	6.00	4.53	6.00	12.02	26.89
	Baltimore	5.95	50.28	48.00	7.05	8.00	1.85	5.00	4.54	30.33
	Baltimore	9.00	35.98	36.00	6.30	5.00	13.65	14.00	6.02	29.05
eld, Mass.	Hebron	10.50	21.11	22.00	4.25	3.50	5.80	7.00	4.06	54.28
"	Hebron	15.00	12.93	12.00	3.60	3.50	7.36	8.00	5.45	55.66
"	Hebron	12.70	21.66	20.00	4.50	4.50	9.50	9.00	5.81	45.83
"	Hebron	12.10	23.85	24.00	5.06	5.00	10.37	9.00	5.92	42.70
	Easton	...	14.22	14.00	4.40	4.00	10.40	10.50	6.94	...
	Easton	12.30	14.65	14.50	3.25	3.25	2.38	5.00	3.28	64.14
Ill...	Baltimore	11.83	16.41	15.00	4.10	4.00	8.38	7.00	5.02	54.26
Ill...	Linwood	12.40	15.18	14.00	5.05	4.00	9.40	11.00	6.96	51.02
g, Md...	Federalburg ...	...	14.44	14.00	4.30	4.00	11.25	11.00	...	...
g, Md...	Federalburg ...	...	17.34	16.00	5.28	4.50	4.23	6.00	...	...
n...	Fallston	11.40	14.48	15.00	5.28	5.00	9.77	10.70	5.73	53.34
d...	Westminster ..	11.60	15.97	15.50	4.90	3.28	9.05	10.27	6.36	57.12
d...	Westminster ..	11.73	16.58	16.44	4.18	4.20	3.88	5.71	3.64	59.99
Pa...	Denton	8.85	15.84	10.00	5.18	4.00	5.08	5.00	3.81	61.24
"	Fallston	10.78	22.86	16.00	3.65	3.00	3.83	3.00	3.29	55.59
"	Bel Air	11.95	11.06	10.00	4.40	3.00	1.60	3.00	1.13	69.86

Name of Feed	Name of Manufacturer
Dairy Feed 15.....	Jno. W. Eshelman & Sons, Lancaster, Pa.—Cont.
Dairy Feed 16½.....	" " " " " " " " " " " "
Dairy Feed 20.....	" " " " " " " " " " " "
*Dairy Feed 25.....	" " " " " " " " " " " "
Dairy Feed 24.....	" " " " " " " " " " " "
Flaked Feed	" " " " " " " " " " " "
Garden Spot Horse Feed.....	" " " " " " " " " " " "
Growing Mash	" " " " " " " " " " " "
Horse Feed 85.....	" " " " " " " " " " " "
Intermediate Chick Feed.....	" " " " " " " " " " " "
Laying Mash	" " " " " " " " " " " "
Pennsy Scratch Feed (No Grit).....	" " " " " " " " " " " "
Scratch Feed (No Grit).....	" " " " " " " " " " " "
Wheat Flour Midds., with Screenings N. E. M. R.	" " " " " " " " " " " "
Wheat Stand. Midds., with G'd Scr'gs N. E. M. R.	Everett Aughenbaugh Co., Waseca, Minn....
Better Powdered Buttermilk.....	P'd by P. Fred. Obrecht & Son, Balto., Md.
Bull Brand Dried Brewers Grains.....	Fairmont Creamery Co., Omaha, Neb.....
Winter Wheat Bran, N. E. M. R. of Screenings...	Farmers Feed Co., Buffalo, N. Y.....
Winter Wheat Bran, may contain M. R. of Scr'gs	Farmers Milling & Grain Co., Mt. Airy, Md....
Winter Wheat Middlings, N. E. M. R. of Scr'gs	" " " " " " " " " " " "
Winter Wheat Middlings, N. E. M. R. Screenings	" " " " " " " " " " " "
Eureka Scratch Feed.....	Federal Milling & Refrig'g Co., Hagerstown, Md.
Eureka Scratch Feed.....	" " " " " " " " " " " "
Federal Chick Feed.....	" " " " " " " " " " " "
Federal Scratch Feed.....	" " " " " " " " " " " "
Federal Scratch Feed.....	" " " " " " " " " " " "
Federal Stock Feed.....	" " " " " " " " " " " "
*Federal Stock Feed.....	" " " " " " " " " " " "
*Federal Stock Feed.....	" " " " " " " " " " " "
Grow Big Hog Ration.....	" " " " " " " " " " " "
*Matchless Dairy Feed.....	" " " " " " " " " " " "
*Matchless Dairy Feed.....	" " " " " " " " " " " "
Makes-Em-Grow Mash.....	" " " " " " " " " " " "
Makes-Em-Lay Mash.....	" " " " " " " " " " " "
Wheat Bran	" " " " " " " " " " " "
Wheat Middlings	" " " " " " " " " " " "
Wheat Bran	Felton & Kelly, Frederick, Md.....
Wheat Bran	" " " " " " " " " " " "
Wheat Middlings	" " " " " " " " " " " "
Wheat Middlings	" " " " " " " " " " " "
*Dried Grains	Fleischmann Co., New York, N. Y.....
Gambrills A. I. Dairy Ration, with Beet Pu'p....	Frederick Co. Farmers Exchange, Frederick, Md....
Gambrills B. M. Chick Mash.....	" " " " " " " " " " " "
Gambrills B. M. Laying Mash.....	" " " " " " " " " " " "
Gambrills B. M. Laying Mash.....	" " " " " " " " " " " "
Gambrills Chick Feed.....	" " " " " " " " " " " "
*Gambrills Dairy Feed.....	" " " " " " " " " " " "
*Gambrills Dairy Feed.....	" " " " " " " " " " " "

* One star means deficient in Protein or Fat.
** Two stars mean deficient in both Protein and Fat.

FEED STUFF ANALYSIS

31

Place Collected	Moisture	Protein		Fat		Fiber		Ash	Nitrogen Free Extract
		FOUND	Guaranteed	FOUND	Guaranteed	FOUND	Guaranteed		
Cont. Goldsboro	10.85	16.63	15.00	5.62	3.00	9.26	10.00	5.48	52.16
Cardova	9.50	18.51	16.50	5.27	3.00	9.25	10.00	6.42	51.05
Frederick	11.30	22.51	20.00	4.60	4.00	9.10	10.00	6.69	45.80
Raspeburg	8.80	26.59	25.00	4.44	5.00	9.95	10.00	.....	.....
.....	7.44	24.74	24.00	4.61	5.00	8.23	10.00	.....	.....
Raspeburg	10.35	12.02	10.00	4.05	2.50	5.19	11.00	2.42	65.97
Baltimore	10.42	8.25	7.00	2.90	2.00	4.85	10.00	3.62	69.96
Denton	11.88	18.87	16.00	5.28	4.00	5.23	8.00	5.53	53.21
Baltimore	12.95	9.54	9.00	2.90	3.00	5.78	10.00	3.21	65.62
Denton	12.20	10.27	10.00	2.95	3.00	1.88	3.00	1.03	71.67
Baltimore	11.13	23.56	20.00	6.25	5.00	5.40	7.00	.....	.....
St. Michaels	12.20	9.83	9.00	2.90	3.00	2.30	4.00	2.21	70.56
Baltimore	12.25	10.00	10.00	2.85	3.00	3.00	4.00	1.62	70.28
Preston	11.68	17.29	16.00	5.85	4.00	6.88	6.00	3.67	54.63
nn. Baltimore	11.90	17.38	15.00	5.45	3.00	8.38	9.50	4.67	52.22
..... Baltimore	9.40	35.54	33.00	7.28	7.00	.....	.....	.....	.....
Md. Baltimore	9.43	23.60	22.00	5.95	6.00	14.80	15.00	2.61	43.61
..... Mt. Airy	9.65	15.62	14.00	4.45	4.00	7.70	10.50	5.57	57.01
..... Derwood	12.23	14.92	14.00	4.40	4.00	8.45	10.50	6.52	53.48
..... Derwood	12.60	16.23	15.00	4.55	4.00	3.90	6.00	4.30	58.42
..... Mt. Airy	12.10	16.41	15.00	4.28	4.00	3.70	6.00	3.05	60.46
n, Md. Hagerstown	11.35	10.27	10.00	2.55	2.50	2.70	5.00	1.54	71.59
..... Hagerstown	13.30	10.27	10.00	2.65	2.50	2.58	5.00	2.50	68.70
..... Hagerstown	12.52	10.88	10.00	6.14	2.50	2.95	5.00	2.82	64.69
..... Hagerstown	12.73	10.35	10.00	2.85	2.50	3.50	5.00	2.31	68.26
..... Hagerstown	11.30	10.35	10.00	2.75	2.50	2.80	5.00	1.77	71.03
..... Hagerstown	10.38	11.41	10.00	5.30	5.00	7.85	10.00	3.33	61.73
..... Westminster	12.10	10.88	10.00	4.38	5.00	5.00	10.00	2.35	65.29
..... Hagerstown	11.25	10.00	10.00	3.88	5.00	7.70	10.00	4.11	63.06
..... Hagerstown	11.00	14.22	14.50	4.80	4.50	3.70	7.00	5.54	60.74
..... Hagerstown	10.28	16.63	18.00	4.65	4.50	9.15	9.00	6.80	52.49
..... Hagerstown	11.00	14.83	18.00	3.95	4.50	9.15	9.00	5.25	55.82
..... Hagerstown	10.65	16.06	15.00	4.45	4.50	3.63	2.00	3.41	61.80
..... Hagerstown	11.20	19.40	20.00	5.50	5.00	6.93	8.00	7.03	49.94
..... Hagerstown	9.90	15.80	14.00	4.15	4.00	9.40	10.00	6.76	53.99
..... Hagerstown	12.10	15.71	15.00	4.35	4.00	4.15	6.00	3.27	60.42
..... Ceresville	11.15	16.67	15.00	3.25	3.00	7.35	9.00	.....	.....
..... Ceresville	11.78	15.36	15.00	3.28	3.00	8.53	9.00	6.72	54.33
..... Ceresville	13.83	15.09	15.25	2.50	2.50	2.63	3.00	2.25	63.70
..... Ceresville	12.50	15.53	15.25	2.80	2.50	2.00	3.00	2.05	65.12
..... Linwood	8.00	20.54	18.00	6.32	7.00	16.95	18.00	2.81	45.38
Md. Sykesville	9.03	20.01	20.00	5.08	4.00	9.60	11.00	5.63	50.65
..... Sykesville	10.42	17.81	16.00	4.35	3.50	3.78	8.00	6.00	57.64
..... Frederick	10.50	21.67	20.00	4.80	3.50	4.70	8.00	5.40	52.93
..... Sykesville	10.59	20.71	20.00	4.23	3.50	5.03	8.00	6.67	52.77
..... Sykesville	13.10	10.27	10.00	3.50	3.00	1.95	5.00	1.68	69.50
..... Frederick	7.75	17.08	16.50	3.71	5.00	11.92	14.00	5.92	53.62
..... Boyds	8.70	17.75	16.50	3.96	5.00	9.70	14.00	6.88	53.01

1923—Complete Analyses of Feeds Collected—1923—Continued.

Name of Feed	Name of Manufacturer
Gambrills Horse Feed.....	Frederick Co. Farmers Ex., Frederick, Md.—Cont.
Gambrills Horse Feed.....	" " " " " " " " " " " "
Gambrills Scratch Feed.....	" " " " " " " " " " " "
Gambrills Scratch Feed.....	" " " " " " " " " " " "
Wheat Flour Midds.....	Geo. D. Friedel & Co., Seaford, Del.....
*Biddy's Own Scratch Feed.....	Galesburg Molasses Feed Co., Galesburg, Ill.
Corn Feed Meal.....	" " " " " " " " " " " "
Corn and Oats Chop.....	" " " " " " " " " " " "
Gamo Horse Feed.....	" " " " " " " " " " " "
Gamo Scratch Feed.....	" " " " " " " " " " " "
Patapsco Mill Feed.....	C. A. Gambrill Mfg. Co., Balto., Md.....
*Alice-Anna Dairy Feed.....	Gambrill Grain Products Co., Balto., Md.....
Alice-Anna Horse Feed Spec.....	" " " " " " " " " " " "
Alice-Anna Scratch Feed (Baby Chick Size)	" " " " " " " " " " " "
Alice-Anna Scratch Feed (No Grit)	" " " " " " " " " " " "
Canton Stock Feed.....	" " " " " " " " " " " "
C. & O. Feed.....	" " " " " " " " " " " "
Bran.....	Aubrey S. Gardner Rolling Mill, Chaptico, Md.
*Middlings.....	Aubrey S. Gardner Rolling Mill, Chaptico, Md.
Green Tag Cotton Seed Meal.....	Green-Mish Co., Washington, D. C.....
Green Tag Cotton Seed Meal.....	Green-Mish Co., Washington, D. C.....
Wheat Bran.....	Greensboro Milling Co., Greensboro, Md.....
*Wheat Middlings.....	Greensboro Milling Co., Greensboro, Md.....
Chick Feed.....	Green Valley Milling Co., Cambridge, Md.....
Corn Feed Meal.....	Hales & Hunter Co., Chicago, Ill.....
Golden Flake Dairy Feed.....	" " " " " " " " " " " "
Kingfalfa Horse Feed.....	" " " " " " " " " " " "
Kingfalfa Horse Feed.....	" " " " " " " " " " " "
*Morning Glory Egg Mash.....	" " " " " " " " " " " "
Morning Glory Scratch (No Grit).....	" " " " " " " " " " " "
Pound Squab Pigeon (No Corn, No Grit) ..	" " " " " " " " " " " "
Red Comb Coarse Chick (No Grit).....	" " " " " " " " " " " "
Red Comb Chick Mash with B. M.....	" " " " " " " " " " " "
Red Comb Egg Mash.....	" " " " " " " " " " " "
Red Comb Fine Chick (No Grit).....	" " " " " " " " " " " "
Red Comb Scratch Feed (No Grit).....	" " " " " " " " " " " "
Dustless Fine Chick Feed.....	Hales Milling Co., Milwaukee, Wis.....
Century Horse Feed.....	Dwight Hamlin Inc., Pittsburg, Pa.....
Quality Feed.....	" " " " " " " " " " " "
Special Horse Feed.....	" " " " " " " " " " " "
Soft Winter Wheat Bran.....	Hardesty Milling Co., Dover, Ohio.....
Soft Winter Wheat Middlings.....	Hardesty Milling Co., Dover, Ohio.....
Wheat Bran.....	Hebron Milling Co., Hebron, Md.....
Wheat Bran.....	" " " " " " " " " " " "
Wheat Middlings.....	" " " " " " " " " " " "
*Wheat Middlings.....	" " " " " " " " " " " "
Red Dog Flour.....	Hecker-Jones-Jewell Milling Co., Buffalo, N.Y.
Wheat Bran.....	Hendrix Supply Co., White Hall, Md.....
Wheat Middlings.....	Hendrix Supply Co., White Hall, Md.....

* One star means deficient in Protein or Fat.

Fred
North
Boyd
Boyd
Galest
Baltim
Pikesv
Baltim
Berwyn
Berwyn
Baltim
Baltim
Baltim
Baltim
Baltim
Chapti
Chapti
Baltim
Silver
Greensl
Greensl
Cambr
Laurel
Laurel
Baltim
Baltim
Baltim
Baltim
Baltim
Baltim
Baltim
Baltim
Brandy
Brandy
Hebron
Hebron
Hebron
Hebron
Walkers
White
White

FEED STUFF ANALYSIS

33

Place Collected	Moisture	Protein		Fat		Fiber		Ash	Nitrogen Free Extract
		FOUND	Guaranteed	FOUND	Guaranteed	FOUND	Guaranteed		
Frederick	9.55	9.23	10.00	2.93	2.00	9.40	15.00	4.10	64.79
North East	10.15	10.52	10.00	2.90	2.00	9.23	15.00	4.20	63.00
Boys	12.00	10.35	10.00	2.88	3.00	2.78	5.00	1.65	70.35
Boys	12.78	10.00	10.00	3.65	3.00	2.80	5.00	1.37	69.40
Galestown	12.68	14.48	14.00	3.45	3.50	2.30	5.00	2.23	64.86
Baltimore	12.40	9.92	10.50	3.33	4.00	2.20	3.00	1.70	70.45
Pikesville	12.35	9.88	10.00	4.90	4.50	2.70	8.00	1.75	68.42
Baltimore .....	.....	10.67	10.50	4.05	4.50	4.86	5.00	.....	.....
Berwyn	11.27	10.44	10.75	4.19	4.50	7.93	8.00	3.28	62.89
Berwyn	12.40	10.79	10.00	3.00	2.00	2.70	5.00	1.53	69.58
Baltimore	10.78	15.01	15.00	4.23	4.00	8.18	9.50	5.69	56.11
Baltimore	9.23	15.55	16.00	3.32	4.00	7.46	14.00	6.36	58.08
Baltimore	13.30	8.03	7.00	2.45	2.00	7.05	12.10	5.50	63.67
Baltimore	12.50	9.30	9.00	3.23	2.00	2.65	6.00	1.65	70.67
Baltimore .....	.....	9.83	9.00	3.45	2.00	2.60	4.00	1.50	.....
Baltimore	13.55	7.48	7.00	2.46	2.00	8.53	12.10	6.38	61.60
Baltimore	11.00	9.79	10.00	3.38	3.00	5.65	11.00	3.22	66.96
Chaptico	9.80	14.04	14.00	4.55	4.00	8.60	10.00	6.50	56.51
Chaptico	12.60	14.39	15.00	3.45	4.00	2.50	6.00	2.60	64.46
Baltimore	8.65	37.21	36.00	7.00	5.50	11.65	14.00	6.56	28.93
Silver Springs	7.00	41.60	41.00	7.28	7.00	7.73	10.00	8.30	23.09
Greensboro .....	.....	13.60	14.00	3.93	4.00	7.90	10.00	5.58	.....
Greensboro .....	.....	13.60	15.00	3.60	4.00	2.30	6.00	3.60	.....
Cambridge .....	.....	9.65	9.65	4.37	4.37	2.78	2.78	.....	.....
Laurel	12.40	9.74	8.50	4.30	2.50	3.45	5.00	1.58	68.53
Laurel	8.85	16.20	16.00	3.70	3.50	11.72	15.00	7.95	51.58
Baltimore	12.85	9.86	10.00	2.90	2.00	9.55	15.00	4.60	60.24
Baltimore	9.32	10.99	10.00	2.78	2.00	10.32	15.00	4.37	62.22
Baltimore	10.00	15.97	16.00	3.53	4.50	6.43	9.00	10.79	53.26
Baltimore	12.78	9.92	10.00	2.63	2.50	2.50	5.00	1.42	70.75
Baltimore	12.05	13.12	10.00	2.45	2.50	4.05	5.00	3.07	65.26
Baltimore	12.63	11.14	10.00	2.93	2.50	2.70	5.00	2.77	67.83
Baltimore	10.88	18.16	18.00	4.85	5.00	4.98	5.00	7.50	53.63
Baltimore	10.40	19.79	20.00	4.93	4.50	4.58	7.00	.....	.....
Baltimore	11.35	10.09	10.00	2.03	2.50	1.38	5.00	12.89	62.26
Baltimore	13.13	9.92	10.00	2.80	2.50	3.30	5.00	.....	.....
Baltimore	11.80	11.41	10.00	2.73	2.50	1.73	5.00	2.02	70.31
Baltimore	13.50	7.06	6.00	1.88	2.00	8.26	10.00	6.02	63.28
Baltimore	10.85	9.10	9.00	2.50	1.50	10.32	12.00	3.74	63.49
Baltimore	11.60	9.07	9.00	2.98	1.50	9.94	10.00	3.42	62.99
Brandywine	10.50	15.27	14.80	3.85	3.00	9.70	11.50	7.10	53.58
Brandywine	10.75	17.55	16.70	5.25	5.00	5.00	7.30	4.80	56.65
Hebron .....	.....	14.48	15.00	4.40	4.00	8.58	9.00	5.81	.....
Hebron	12.00	15.80	15.00	4.50	4.00	6.65	9.00	5.85	55.20
Hebron	11.95	16.58	16.00	4.45	4.00	4.33	5.00	3.68	59.01
Hebron	12.95	14.92	16.00	3.88	4.00	3.05	5.00	4.05	61.15
Walkersville	11.32	17.68	14.50	4.75	4.00	2.35	4.00	2.86	61.04
White Hall .....	.....	16.85	14.50	4.23	4.00	6.40	9.00	4.91	.....
White Hall .....	.....	15.62	15.00	2.67	3.00	1.95	5.00	1.88	.....

1923—Complete Analyses of Feeds Collected—1923—Continued.

Name of Feed	Name of Manufacturer
"Just Right" Wheat Bran, small % Screenings..	S. W. Hershey Flour Mills, York, Pa.....
"Just Right" Wheat Middlings.....	S. W. Hershey Flour Mills, York, Pa.....
Wheat Bran	Hickerson Bros., Rockville, Md.....
*Wheat Middlings	Hickerson Bros., Rockville, Md.....
Choice Quality Cotton Seed Meal	Highland Park Mfg. Co., Rock Hill, S. C....
Wheat Bran	J. E. Higman & Sons, Millington, Md.....
Wheat Middlings	J. E. Higman & Sons, Millington, Md.....
Capitol City Dairy Feed.....	W. S. Hoge & Bro., Washington, D. C.....
Columbia Dairy Feed.....	" " " " " "
Falco Horse Feed.....	" " " " " "
*Hoge's Best Dairy Feed.....	" " " " " "
Hoge's Best Horse Feed.....	" " " " " "
Milk Maker Dairy Ration.....	" " " " " "
Horse Feed	Wm. Hopps & Co., Baltimore, Md.....
Red Seal Red Dog.....	Hormel Milling Co., Austin, Minn.....
Red Seal Red Dog.....	Hormel Milling Co., Austin, Minn.....
*Stand. Wheat Midds., W. G. S., N. E. M. R.	Hubbard Milling Co., Mankato, Minn.....
	P'd by Hales & Hunter.
Chicken Hash Kleen Maid Scratch Feed...	Hummer Szama Co., Milwaukee, Wis.....
Corn and Oat Chop.....	" " " " " "
Corn and Oat Chop.....	" " " " " "
Bull Brand Cottonseed Meal	Humphreys-Godwin Co., Memphis, Tenn.....
Danish Brand Cottonseed Feed.....	" " " " " "
Dixie Brand Cottonseed Meal.....	" " " " " "
Dixie Brand Cottonseed Meal.....	" " " " " "
Wheat Bran	Hurlock Milling Co., Hurlock, Md.....
Wheat Middlings	Hurlock Milling Co., Hurlock, Md.....
Homestead Dairy Feed.....	Illinois Feed & Elevator Co., Bloomington, Ill
Illinois Laying Mash.....	" " " " " "
Illinois Mixed Feed.....	" " " " " "
50% Meat Scrap & Bone.....	Independent Mfg. Co., Phila., Pa.....
Bran	Ingleside Milling Co., Ingleside, Md.....
Middlings	Ingleside Milling Co., Ingleside, Md.....
Blackhawk Pure Wheat Bran.....	International Milling Co., New Prague, Minn.
Blackhawk Reground Oat Feed.....	" " " " " "
Blackhawk Wheat Midds., W.G.S., N.E.M.R.	" " " " " "
Robin Hood Wheat Shorts, N. Ex. M. R., with Screenings	Robin Hoods Mills, Moose Jaw, Canada.....
Blue Moose Pulverized Oat Feed.....	Robin Hoods Mills, Moose Jaw, Canada.....
Climax Hog Feed.....	International Sugar Feed Co., Minneapolis, Minn.
Minnesota Dairy Feed.....	" " " " " "
Special Dairy Feed.....	" " " " " "
Wheat Bran & Wheat Screenings, with M. R. Gr'd Wht. Screenings N. E. 8%.....	Ismert-Hincke Milling Co., Kansas City, Kans....
	P'd by Md. Brick & Supply Co., Frederick, Md.
Wheat Flour Middlings, with Screenings..	W. J. Jennison & Co., Minneapolis, Minn.....
*Corn, Oats & Barley Chop.....	R. D. Johnson Milling Co., Cumberland, Md.
*Scratch Feed	" " " " " "
Wheat Bran & Screenings.....	" " " " " "

* One star means deficient in Protein or Fat.

** Two stars mean deficient in both Protein and Fat.

FEED STUFF ANALYSIS

35

Place Collected	Moisture	Protein		Fat		Fiber		Ash	Nitrogen Free Extract
		FOUND	Guaranteed	FOUND	Guaranteed	FOUND	Guaranteed		
Taneytown	10.70	16.94	15.00	4.43	4.50	8.65	11.00	6.40	52.88
Taneytown	11.38	17.55	16.75	4.75	4.75	4.45	6.50	4.01	57.86
Rockville	8.93	16.15	14.30	5.00	3.70	8.95	10.68	6.61	54.36
Rockville	11.03	13.65	15.01	3.40	4.35	3.18	4.60	2.97	65.77
C.	7.10	43.88	42.50	7.48	7.00	7.55	10.00	7.05	26.94
Rockville	10.28	14.79	13.00	3.73	3.00	8.05	9.00	6.11	57.04
Millington	9.95	16.41	14.00	4.05	4.00	4.08	5.00	4.42	61.09
Chestertown	10.70	18.17	15.00	4.00	3.50	9.55	10.00	6.14	51.44
Camp Springs	9.45	22.70	20.00	3.49	3.00	7.50	10.00	5.55	51.31
Clinton	11.25	8.40	6.00	3.36	2.00	11.05	10.00	7.45	58.49
Chestertown	8.95	24.40	25.00	4.18	5.00	9.04	10.00	5.83	47.60
Camp Springs	10.40	8.82	7.00	3.23	1.00	7.51	10.00	3.53	66.51
Chestertown	10.35	16.92	16.50	4.21	3.50	11.56	10.00	6.02	50.94
Baltimore	11.08	10.89	10.00	3.44	3.00	10.00	12.00	4.85	59.74
Oakland	10.95	17.38	16.50	4.70	3.50	4.10	6.00	4.18	58.69
Frederick	11.07	17.72	16.50	3.38	3.50	2.58	6.00	3.13	62.12
Berwyn	11.60	15.80	15.70	4.24	4.80	9.20	9.50	4.82	54.34
Baltimore	12.28	10.35	9.00	2.23	2.00	3.00	5.00	1.80	70.34
Baltimore	10.80	11.93	10.00	3.70	4.00	6.05	8.00	3.09	64.43
Baltimore	10.40	11.41	10.00	3.73	4.00	6.50	8.00	2.96	65.00
Cumberland	9.40	43.35	43.00	7.85	5.00	6.80	10.00	7.71	24.89
Rising Sun	8.28	37.47	36.00	6.90	5.00	11.65	15.00	6.81	28.89
Buckeystown	7.85	42.21	41.00	6.80	5.00	9.50	10.00	7.32	26.32
Parkton	9.15	40.98	41.00	6.90	5.00	11.50	10.00	5.45	26.02
Hurlock	9.58	14.92	14.50	4.90	4.00	9.70	9.00	7.09	53.81
Hurlock	12.60	15.27	15.00	4.50	4.00	5.95	5.00	4.35	57.33
Baltimore	8.75	22.46	22.00	5.70	5.00	9.30	10.00	7.10	46.69
Frostburg	10.35	19.49	20.00	5.35	4.50	7.40	9.00	6.17	51.24
Frostburg	12.40	10.36	11.00	3.75	3.25	3.45	4.00	1.91	68.13
Frederick	6.50	50.72	50.00	10.93	8.00	2.23	3.00	29.48	14
Ingleside	11.85	14.04	14.00	3.35	3.00	6.60	8.00	5.55	58.61
Ingleside	12.95	13.39	14.50	3.00	3.50	2.65	4.50	3.40	63.61
Baltimore	...	14.74	15.50	5.15	3.20	11.25	12.00	6.39	...
Cockeysville	6.20	6.41	5.25	2.25	2.50	27.00	28.00	5.68	52.46
Westminster	11.50	16.58	16.50	5.20	4.50	8.18	8.50	5.00	53.54
Baltimore	10.28	16.54	17.00	5.35	4.50	9.28	9.50	4.39	54.16
Chestertown	7.93	5.70	5.50	2.03	2.50	28.92	28.00	5.80	49.62
North East	9.45	16.22	16.00	5.36	4.00	9.87	11.00	9.90	49.20
Gaithersburg	9.25	12.43	11.50	6.20	4.00	11.05	13.00	8.72	52.35
Gaithersburg	9.40	15.47	15.00	5.77	4.50	9.85	12.00	8.18	51.33
Camp Springs	11.20	15.62	14.50	4.30	3.50	10.33	7.00	7.57	50.98
Havre de Grace	11.73	17.46	16.00	4.00	4.00	6.45	6.00	4.51	55.85
Cumberland	9.60	8.34	9.51	2.95	4.15	8.78	10.27	5.74	64.59
Cumberland	13.07	10.01	11.50	4.00	3.46	3.97	2.48	1.73	67.22
Cumberland	12.88	14.74	13.02	4.85	5.22	8.60	8.70	6.08	52.85

Name of Feed	Name of Manufacturer
White Middlings	R. D. Johnson Milling Co., Cumberland, Md.—Cont.
Wheat Bran & Wheat Screenings N. E. 8 %	Kansas Flour Mills Co., Kansas City, Mo.....
Wheat Bran	Keedysville Milling Co., Keedysville, Md.....
Wheat Middlings	Keedysville Milling Co., Keedysville, Md.....
Snowball Wheat Flour Midds., with Gr'd Screenings, N. E. M. R.....	King Midas Milling Co., Minneapolis, Minn.....
Buttermilk Laying Mash.....	Chas. F. Knock, Frederick, Md.....
*Buttermilk Laying Mash.....	" " " " " "
Chick Feed	" " " " " "
Chick Feed	" " " " " "
Scratch Feed	" " " " " "
Scratch Feed	" " " " " "
Amerikorn 24 % Dairy Ration.....	Chas. A. Krause Milling Co., Milwaukee, Wis.
Badger 16 ½ % Sweet Dairy Ration.....	" " " " " "
Badger Blue Top Horse Feed.....	" " " " " "
Blue Top Chick Feed.....	" " " " " "
Blue Top Dairy.....	" " " " " "
*Blue Top Egg Mash.....	" " " " " "
Blue Top Horse Feed.....	" " " " " "
Blue Top Scratch Feed (No Grit).....	" " " " " "
Cream City Scratch.....	" " " " " "
Crescent Horse Feed.....	" " " " " "
Homohog (The Pork Maker).....	" " " " " "
Kookoo Chick Feed.....	" " " " " "
Kookoo Developing Feed.....	" " " " " "
Kookoo Egg Mash.....	" " " " " "
Pul Mor Horse Feed.....	" " " " " "
Erie Baby Chick Feed.....	Lake Erie Milling Co., Toledo, Ohio.....
*Erie Scratch Grains.....	" " " " " "
*Flaked Oat & Corn Chop.....	" " " " " "
Conestoga Dairy Feed.....	Lancaster Mill & Elevator Co., Lancaster, Pa.
85 % Grain Red Rose Horse Feed.....	" " " " " "
Golden Rod Dairy Feed.....	" " " " " "
Lancaster Dairy Feed 20 %.....	" " " " " "
Lancaster Scratch Feed.....	" " " " " "
Liberty Horse Feed.....	" " " " " "
Tally Ho Horse Feed.....	" " " " " "
Wheat Bran & Wheat Scr'gs., N. to Ex. 8 %	Larabee Flour Mills Corp., Kansas City, Mo.
*Choice Cottonseed Meal.....	Larrowe Milling Co., Detroit, Mich.....
Dried Beet Pulp.....	" " " " " "
Dried Beet Pulp.....	" " " " " "
Dried Beet Pulp.....	" " " " " "
Larrowe Hog Feed.....	" " " " " "
Larro Feed	" " " " " "
Larro Feed	" " " " " "
Snowflake Bran & Gr'd Screenings.....	Lawrenceburg Roller Mill Co., Lawrenceburg, Ind.
Winter Wheat Bran, M. R. G. S.....	Liberty Milling Co., Germantown, Md.....
Winter Wheat Bran, M. R. G. S.....	" " " " " "
Winter Wheat Middlings, M. R. G. S.....	" " " " " "

* One star means deficient in Protein or Fat.

FEED STUFF ANALYSIS

37

Place Collected	Moisture	Protein		Fat		Fiber		Ash	Nitrogen Free Extract
		FOUND	Guaranteed	FOUND	Guaranteed	FOUND	Guaranteed		
Cumberland ...	11.90	15.27	15.02	4.10	4.19	2.45	3.17	2.42	63.86
Oakland	12.25	16.23	14.50	3.35	3.50	9.35	11.00	6.83	51.99
Keedysville	11.00	16.32	16.50	4.15	4.00	8.35	8.50	6.00	54.18
Keedysville	12.00	16.02	16.50	3.80	3.50	2.75	3.00	3.18	62.25
Port Deposit ...	11.45	17.20	16.00	5.50	4.00	7.55	6.00	4.86	53.44
Frederick	9.45	20.45	20.00	5.80	5.00	7.35	7.00	9.80	47.15
Frederick	10.90	17.16	20.00	5.13	5.00	6.20	7.00	6.76	53.85
Frederick	11.75	10.71	10.00	4.50	3.00	2.30	3.00	1.95	68.79
Frederick	12.88	10.44	10.00	3.25	3.00	2.53	3.00	1.59	69.31
Frederick	11.75	11.41	10.00	2.75	3.00	3.55	4.00	1.80	68.74
Frederick	12.70	10.00	10.00	4.61	3.00	2.10	4.00	1.71	68.78
Gaithersburg ...	10.25	23.96	24.00	4.60	5.00	10.10	10.00	6.00	45.09
Baltimore	8.92	16.09	16.50	5.27	3.50	14.35	11.00	7.70	47.67
Baltimore	13.35	10.99	10.00	2.97	1.00	8.78	16.00	5.32	58.59
Baltimore	12.95	10.00	9.00	2.50	1.50	1.50	5.00	2.79	70.26
Baltimore	8.83	14.30	15.00	4.24	3.50	14.65	14.00	8.12	49.86
Baltimore	11.40	18.82	20.00	4.90	5.00	6.68	7.00	4.55	53.65
Towson	10.75	11.85	10.00	2.75	1.00	11.00	16.00	4.98	58.67
Baltimore	12.33	10.79	9.00	2.80	1.50	2.73	5.00	1.56	69.79
Baltimore	13.90	9.65	9.00	2.33	1.50	2.50	5.00	1.64	69.98
Baltimore	11.77	9.64	9.00	2.26	1.50	8.37	12.00	4.90	63.06
Baltimore	9.85	14.92	13.00	6.58	6.00	4.35	4.50	3.91	60.39
Baltimore	12.18	11.85	9.00	3.40	1.50	2.05	5.00	3.86	66.66
Baltimore	13.85	10.35	9.00	2.50	1.50	2.18	5.00	1.44	69.68
Baltimore	10.53	20.36	20.00	4.87	5.25	7.08	6.00	5.95	51.21
Baltimore	11.95	9.07	9.00	2.79	1.00	10.59	12.00	6.75	58.85
Hancock	13.50	10.09	10.00	2.83	3.00	2.50	5.00	1.34	69.74
Hancock	12.98	10.00	10.00	2.45	3.00	2.18	7.00	1.51	70.88
Baltimore	12.70	10.27	10.00	3.40	4.00	4.52	9.00	1.80	67.31
Sudlersville ...	8.00	16.87	16.50	4.37	3.50	11.96	10.00	7.08	51.72
Goldsboro	12.30	9.47	9.00	2.68	3.00	8.67	10.00	4.62	62.26
Sudlersville ...	10.55	27.56	25.00	4.95	5.00	10.18	10.00	5.27	41.49
Sudlersville ...	7.37	21.11	20.00	4.30	4.00	9.81	10.00	6.55	50.86
Baltimore	11.68	10.00	10.00	2.95	3.00	2.73	4.00	1.39	71.25
Baltimore	10.00	7.57	7.00	2.30	2.00	7.09	10.00	5.44	67.60
Baltimore	13.50	7.48	7.00	2.02	2.00	7.81	10.00	5.82	63.37
Silver Springs..	11.23	15.27	15.00	4.30	3.50	9.20	10.00	6.27	53.73
Buck Lodge ...	8.05	41.94	43.00	7.40	6.00	8.90	10.00	...	...
Preston	6.43	10.67	8.00	.88	.50	20.08	20.00	3.83	58.11
Baltimore	7.05	10.88	8.00	.65	.50	13.19	20.00	7.06	61.17
Rising Sun	11.10	9.83	8.00	.60	.50	20.25	20.00	3.31	54.91
Baltimore	10.83	19.04	18.00	5.23	5.00	7.43	10.00	5.33	52.14
Baltimore	9.60	20.45	20.00	4.25	4.00	11.93	12.00	5.60	48.17
Centreville ...	11.58	19.22	20.00	3.93	4.00	11.38	12.00	9.00	44.89
Cumberland ...	10.50	15.53	14.50	3.95	3.50	9.90	11.00	7.44	52.72
Barnesville ...	10.15	15.09	14.00	5.10	4.00	9.95	10.50	6.40	53.31
Germantown ...	12.95	14.22	14.00	4.45	4.00	8.50	10.50	6.38	53.50
Gaithersburg ...	12.33	16.85	15.00	5.05	4.00	4.73	6.00	4.30	56.74

1923—Complete Analyses of Feeds Collected—1923—Continued.

Name of Feed	Name of Manufacturer
Winter Wheat Middlings, M. R. G. S.	Liberty Milling Co., Germantown, Md.—Cont.
Bran	S. C. Long, Wicomico, Md.
Middlings	S. C. Long, Wicomico, Md.
Sonny South Pure Wheat Bran	Louisville Milling Co., Louisville, Ky.
Neal's Choice Cotton Seed Meal	L. B. Lovitt & Co., Memphis, Tenn.
Neal's Choice Cotton Seed Meal	" " " " " " " " " " " "
36 Brand Cotton Seed Meal	" " " " " " " " " " " "
Guilford Chick Feed	Walter F. MacNeal & Co., Balto., Md.
Guilford Scratch Feed	Walter F. MacNeal & Co., Balto., Md.
Bran and Middlings	L. P. McCracken, Cookeville, Md.
Jumbo Dairy Feed	McMillen Co., Fort Wayne, Ind.
Jumbo Stock Feed	" " " " " " " " " " " "
Universal Dairy Feed	" " " " " " " " " " " "
Wayne Dairy Feed	" " " " " " " " " " " "
Wayne Egg Mash, with Dried Buttermilk ..	" " " " " " " " " " " "
Wayne Hog Feed	" " " " " " " " " " " "
Wayne Special Horse Feed	" " " " " " " " " " " "
Pure Winter Wheat Bran	Malko Milling & Light Co., Hampstead, Md.
Pure Winter Wheat Middlings	" " " " " " " " " " " "
Pure Winter Wheat Middlings	" " " " " " " " " " " "
Good Cotton Seed Meal	Marianna Cotton Oil Co., Memphis, Tenn.
Good Cotton Seed Meal	" " " " " " " " " " " "
White Mule Brand Cotton Seed Meal	" " " " " " " " " " " "
Cotton Seed Meal	Marion Cotton Oil Co., Marion, S. C.
*Bull Brand Chick Feed	Maritime Milling Co., Inc., Buffalo, N. Y.
*Bull Brand Dairy Ration	" " " " " " " " " " " "
*Bull Brand Developing Feed	" " " " " " " " " " " "
Bull Brand Growing Mash	" " " " " " " " " " " "
*Bull Brand Laying Mash, with Dried Buttermilk	" " " " " " " " " " " "
Bull Brand Laying Mash, with Dried Buttermilk	" " " " " " " " " " " "
Bull Brand Scratch Feed	" " " " " " " " " " " "
Corn Feed Meal	" " " " " " " " " " " "
Daisy Scratch Feed	" " " " " " " " " " " "
Red "E" Mixed Creamery Feed	" " " " " " " " " " " "
*Bran	Matthews-Howard Co., Inc., La Plata, Md.
*More Cream Dairy Feed	" " " " " " " " " " " "
More Cream Dairy Feed	" " " " " " " " " " " "
Wheat Bran	" " " " " " " " " " " "
Wheat Middlings	" " " " " " " " " " " "
Wheat Middlings	" " " " " " " " " " " "
Mennel's Fancy Wheat Bran	Mennel Milling Co., Toledo, Ohio.
Mennel's Middlings	" " " " " " " " " " " "
Mennel's Middlings	" " " " " " " " " " " "
Mennel's Winter Mixed Feed	" " " " " " " " " " " "
Barley Feed, with Screenings	P'd by Farmers Fert. & Feed Co., Westminster, Md.
	Menomonie Milling Co., Menomonie, Wis.
	P'd by M. F. Baringer, Phila., Pa.
*Laying Mash, with B. M.	Henry Mesner & Son, Balto., Md.
Special Scratch Feed	Henry Mesner & Son, Balto., Md.

* One star means deficient in Protein or Fat.

FEED STUFF ANALYSIS

39

Place Collected	Moisture	Protein		Fat		Fiber		Ash	Nitrogen Free Extract
		FOUND	Guaranteed	FOUND	Guaranteed	FOUND	Guaranteed		
—Cont.									
Germantown . . .	11.20	16.94	15.00	5.25	4.00	4.00	6.00	3.56	59.05
Wicomico	12.15	14.83	14.00	3.60	4.00	7.85	10.00	6.12	55.45
Wicomico	12.70	16.32	15.00	4.25	4.00	4.25	6.00	3.96	58.52
Westminster . . .	11.30	17.02	14.50	4.08	4.00	6.50	8.75	6.90	54.20
Baltimore	7.75	43.88	43.00	7.20	6.00	9.40	10.00	4.07	27.70
Preston	8.63	43.53	43.00	7.00	6.00	8.68	10.00	7.50	24.66
Westminster . . .	8.50	36.59	36.00	6.33	5.00	12.15	14.00	6.40	30.03
Baltimore	11.78	11.23	10.00	3.90	3.00	2.33	4.00	4.18	66.58
Baltimore	11.88	10.35	10.00	2.88	3.00	2.75	4.00	1.61	70.53
Cooksville		14.22	14.00	4.95	4.50	7.00	8.00	4.65	
Cumberland	11.70	16.76	16.00	3.25	3.50	14.47	12.00	8.03	45.79
Oakland	10.73	9.30	9.00	3.07	3.50	11.13	12.00	3.36	62.41
Oakland	10.75	22.20	20.00	4.68	3.50	8.70	11.00	6.26	47.41
Oakland	10.50	24.37	24.00	4.11	4.00	8.35	11.00	5.12	47.55
Oakland	12.50	19.92	20.00	4.50	3.70	5.70	8.00	5.53	51.85
Oakland	12.00	17.99	18.00	3.95	3.50	5.25	8.00	4.66	56.15
Oakland	10.60	11.06	9.00	4.48	3.00	8.27	10.00	2.76	62.84
Hampstead	10.25	15.18	14.00	4.30	4.00	7.90	10.50	5.54	56.83
Reisterstown . . .		15.97	15.00	4.45	4.00	4.05	6.00	3.44	
Hampstead	11.35	15.27	15.00	4.00	4.00	3.48	6.00	2.60	63.30
Sparks	7.58	35.23	36.00	7.65	5.00	14.25	14.00	5.71	29.58
Laurel	8.68	35.72	36.00	6.98	5.00	13.45	14.00	5.62	29.55
Sykesville	7.73	42.12	41.00	7.80	6.00	9.05	10.00	7.69	25.61
Rising Sun	8.00	35.01	36.00	5.73	5.00	14.28	12.00	6.10	30.88
Baltimore	13.70	10.97	11.00	1.70	3.00	1.50	4.00	1.00	71.13
Baltimore	11.55	24.22	24.00	5.23	6.00	8.83	12.00	5.75	44.42
Baltimore	15.15	10.18	10.00	1.86	3.00	2.50	5.00	1.67	68.64
Baltimore	12.30	18.65	18.00	5.03	5.00	6.05	7.00	7.88	50.09
Baltimore	11.03	17.68	20.00	5.00	5.00	14.35	8.00	6.68	45.26
Baltimore	11.58	21.41	20.00	5.45	5.00	6.05	8.00	8.75	46.76
Baltimore	13.50	10.53	11.00	2.75	3.00	2.65	4.00	1.70	68.87
Baltimore	9.68	9.39	9.00	3.63	3.00	2.48	3.50	1.66	73.16
Baltimore	15.40	9.92	9.00	2.53	3.00	3.05	5.00	2.14	66.96
Baltimore	11.70	19.61	20.00	4.80	5.00	9.15	10.00	5.07	49.67
La Plata	9.75	14.04	14.25	3.50	4.25	8.90	11.00	6.50	57.31
La Plata	10.30	17.29	15.50	3.97	5.50	7.75	9.50	3.51	57.18
La Plata	11.05	15.84	15.50	5.63	5.50	9.33	9.50	4.18	53.97
La Plata	12.35	14.39	14.25	4.33	4.25	10.63	11.00	7.84	50.46
La Plata	13.33	15.18	15.00	3.93	3.75	4.45	4.50	4.52	58.59
La Plata	11.10	15.09	15.00	3.75	3.75	3.85	4.50	3.61	62.60
Westminster	11.78	15.45	15.00	4.13	4.00	10.15	9.50	6.96	51.53
Emmitsburg	11.13	16.50	15.00	4.40	4.00	6.10	6.50	4.95	56.92
Parkton	10.40	17.16	15.00	4.23	4.00	6.78	6.50	4.97	55.92
Westminster	12.20	16.67	15.00	4.35	4.00	8.05	8.00	5.56	53.17
Walkersville . . .	10.20	12.37	12.00	3.50	2.00	9.35	14.00	3.65	60.93
Baltimore	11.70	14.83	20.00	5.15	5.00	8.20	8.00	6.64	53.48
Baltimore	11.93	10.09	10.00	3.55	2.50	3.30	5.00	1.65	69.48

Name of Feed	Name of Manufacturer
Bran	Leo Michael, Buckeystown, Md.....
Hog Feed	" " " "
Horse Feed	" " " "
Horse Feed	" " " "
Scratch Feed	" " " "
Shorts	" " " "
Pure Wheat Bran	Mill of Albert Lea, Minneapolis, Minn.....
	P'd by S. H. Young & Co., Phila., Pa.
Golden Pure Durum Wheat Flour Midds.	Minneapolis Milling Co., Minneapolis, Minn.
Fancy Bran	Minot Flour Mill Co., Minot, N. D.....
	P'd by J. Proctor Towson, Balto., Md.
Fancy Middlings	Minot Flour Mill Co., Minot, N. D.....
Alfalfa Meal	Missouri River Alfalfa Milling Co., Kansas City, Mo.
Winter Wheat Bran.....	Mountain City Mills, Frederick, Md.....
	P'd by D. W. Dietrich & Co., Phila., Pa.
Winter Wheat Flour Middlings.....	" " " "
*Winter Wheat Flour Middlings.....	" " " "
Meat and Bone Scraps.....	Mutual Rendering Co., Inc., Phila., Pa.....
Sioux Poultry Feed.....	Mystic Mills, Sioux City, Iowa.....
Alfalfa Meal	National Hay & Milling Co., Kansas City, Mo.
Alfalfa Meal	National Hay & Milling Co., Kansas City, Mo.
Bran	New Market Milling Co., Charlotte Hall, Md.
*Middlings	New Market Milling Co., Charlotte Hall, Md.
Palmo Midds	Newsome Feed & Grain Co., Pittsburgh, Pa...
Palmo Midds	Newsome Feed & Grain Co., Pittsburgh, Pa...
*Notalco Extra Quality Meat Scraps.....	Norfolk Tallow Co., Norfolk, Va.....
Poultry Scratch	Northeastern Bird & Feed Store, Balto., Md.
	P'd by Lewis Thilmany, Balto., Md.
Reground Oat Feed.....	Northern Illinois Cereal Co., Lockport, Ill...
Pure Wheat Bran.....	Northwestern Cons. Milling Co., Minneapolis, Minn.
XXX Comet	Northwestern Cons. Milling Co., Minneapolis, Minn.
Pure Wheat Bran.....	Northwestern Elevator & Mill Co., Mt. Vernon, Ohio
Orleans Wheat Flour Middlings, with Gr'd	
S., N. Ex. M. R.	Northwestern Feed Co., Minneapolis, Minn...
Orleans Wheat Flour Middlings, With Gr'd	
S. N. Ex. M. R.	Northwestern Feed Co., Minneapolis, Minn...
*H. G. Meat Meal.....	Norton & Co., Washington, D. C.....
*H. G. Meat Meal.....	Norton & Co., Washington, D. C.....
Standard Brand Cotton Seed Feed Meal...	W. C. Nothern, Memphis, Tenn.....
Domino Butterine Dairy Feed.....	Nowak Milling Corp., Buffalo, N. Y.....
Domino Chick Feed.....	" " " "
Domino Growing Mash, with Buttermilk..	" " " "
Domino Laying Mash, with Buttermilk..	" " " "
Domino Vimoline Horse Feed.....	" " " "
Fidelity Scratch Feed.....	" " " "
Fidelity Stock Feed.....	" " " "
Marathon Chick Feed.....	" " " "
Marathon Horse Feed.....	" " " "
*Union Dairy Feed.....	" " " "

* One star means deficient in Protein or Fat.

Co

Bucke
Bucke
Bucke
Bucke
Bucke
Bucke
Goldsl

Germa
Baltim

Baltim
Freder
Freder

Freder
Freder
Baltim
Baltim
Preston
Baltim
Charlo
Charlo

Hamps
Baltim
Baltim

Baltim
Baltim
Baltim
Salisbu

Hurloc

Thurmo
German
Clinton
Westmi
Greensl
Greensl
Elkton
Elkton
Elkton
Elkton
Berlin
Greensb
Greensb
Elkton

FEED STUFF ANALYSIS

41

Place Collected	Moisture	Protein		Fat		Fiber		Ash	Nitrogen Free Extract
		FOUND	Guaranteed	FOUND	Guaranteed	FOUND	Guaranteed		
Buckeystown ..	10.90	15.79	15.00	4.19	4.00	7.40	9.00	5.84	55.88
Buckeystown ..	11.85	11.98	11.00	4.75	4.00	5.82	7.00	5.70	59.90
Buckeystown ..	12.55	11.14	10.00	4.90	3.50	5.70	7.00	3.29	62.42
Buckeystown ..	12.73	10.92	10.00	4.10	3.50	5.40	7.00	3.08	63.77
Buckeystown ..	12.90	9.82	9.50	2.65	2.50	3.62	5.00	1.82	69.19
Buckeystown ..	12.40	15.66	15.00	4.36	4.00	4.29	5.00	.....	.....
Goldsboro ..	10.20	15.62	15.00	5.15	4.00	9.40	12.00	5.42	54.21
Germantown ..	10.35	16.32	16.00	5.15	5.50	5.30	6.00	3.53	59.35
Baltimore ..	9.90	15.62	15.50	5.20	5.00	10.28	9.50	7.15	51.85
Baltimore ..	11.40	17.46	16.20	4.78	5.20	7.38	6.80	4.85	54.13
Frederick ..	10.13	15.80	12.00	1.80	1.50	25.00	35.00	8.19	39.08
Frederick ..	12.38	14.48	14.00	3.70	4.00	9.95	11.00	6.51	52.98
Frederick ..	11.68	16.23	15.00	3.88	4.00	5.33	8.50	3.62	59.26
Frederick ..	11.85	16.94	15.00	3.09	4.00	5.15	8.50	4.75	58.22
Baltimore ..	6.28	50.02	50.00	13.70	10.00	1.68	2.00	28.26	0.00
Baltimore ..	11.53	10.35	9.00	2.45	2.50	2.00	4.00	1.50	72.17
Preston ..	8.45	13.16	12.00	1.38	1.50	32.20	35.00	8.64	36.17
Baltimore ..	11.00	13.60	12.00	1.73	1.50	27.25	35.00	8.48	37.94
Charlotte Hall ..	10.65	14.48	14.00	3.95	4.00	7.75	10.00	5.56	57.61
Charlotte Hall ..	11.65	14.92	15.00	2.60	4.00	1.70	5.00	2.26	66.87
Hampstead ..	5.50	16.06	16.00	9.00	7.00	6.88	9.00	8.57	63.99
Baltimore ..	6.75	16.06	16.00	8.43	7.00	7.95	9.00	5.30	55.51
Baltimore ..	6.85	48.47	50.00	16.58	5.00	2.00	3.00	25.76	.34
Baltimore ..	11.98	11.06	10.00	3.08	2.50	3.35	5.00	1.85	68.68
Baltimore ..	8.03	3.77	3.50	1.25	1.25	33.43	35.00	6.55	46.97
Baltimore ..	10.13	15.58	13.00	5.18	4.00	9.95	13.00	6.40	52.76
Baltimore ..	12.05	19.09	16.00	3.95	4.00	2.55	4.00	3.46	58.90
Salisbury ..	10.85	15.97	13.00	4.20	3.00	9.80	11.00	7.09	52.09
Hurlock ..	10.78	16.50	16.00	5.50	4.00	6.15	6.00	4.20	56.87
Thurmont ..	10.50	17.50	16.00	5.83	4.00	5.90	6.00	4.28	55.99
Germantown ..	7.96	48.04	50.00	12.60	10.00	1.58	2.00	27.60	2.22
Clinton ..	8.08	50.33	55.00	9.90	10.00	1.85	2.00	.....	.....
Westminster ..	9.00	36.59	36.00	6.30	5.00	13.42	12.00	6.55	28.14
Greensboro ..	11.68	16.37	17.00	5.15	3.50	11.65	15.00	7.84	47.31
Greensboro ..	12.87	11.41	11.00	2.73	2.00	1.80	5.00	1.48	69.71
Elkton ..	10.53	19.22	18.00	5.23	4.50	5.45	7.00	5.74	53.83
Elkton ..	10.83	21.81	18.00	5.55	3.50	5.35	7.00	8.71	47.75
Elkton ..	10.35	10.24	8.00	3.61	2.00	5.33	9.00	2.27	68.20
Elkton ..	12.78	10.35	10.00	3.83	3.00	3.18	5.00	1.55	68.31
Berlin ..	12.33	9.83	8.00	3.65	3.00	9.95	12.00	3.50	60.74
Greensboro ..	13.55	10.80	11.00	3.10	2.00	1.55	5.00	1.07	69.93
Greensboro ..	13.70	8.27	6.50	2.64	1.50	8.90	12.00	4.25	62.24
Elkton ..	10.00	13.57	15.00	5.30	3.00	12.00	16.00	.....	.....

Name of Feed	Name of Manufacturer
Ideal Growing Mash.....	Nuttle Milling Co., Denton, Md.....
Ideal Growing Mash.....	" " " " " ".....
Ideal Laying Mash.....	" " " " " ".....
Ideal Laying Mash.....	" " " " " ".....
*Ideal Scratch Feed.....	" " " " " ".....
Ideal Scratch Feed.....	Geo. F. Obrecht, Balto., Md.....
Wonder Laying Mash.....	" " " " " ".....
Wonder Laying Mash.....	" " " " " ".....
*Wonder Laying Mash.....	" " " " " ".....
*Wonder Scratch Feed.....	P. Fred'k Obrecht & Son, Balto., Md.....
*Chick (Developer).....	" " " " " ".....
*Dairy Feed.....	" " " " " ".....
*Dairy Ration.....	" " " " " ".....
Molasses Horse Feed.....	" " " " " ".....
*Poultry Mash.....	" " " " " ".....
*Poultry Mash.....	" " " " " ".....
Special Scratch.....	" " " " " ".....
*Scratch.....	" " " " " ".....
*Scratch.....	Park & Pollard Co., Inc., Buffalo, N. Y.....
Bonnie Booster, with B. M.....	" " " " " ".....
Growing Feed.....	" " " " " ".....
Intermediate Chick Feed.....	" " " " " ".....
Lay or Bust Dry Mash.....	" " " " " ".....
Pontiac Scratch Feed.....	" " " " " ".....
Red Ribbon Scratch Feed.....	Pecos Valley Alfalfa Mill Co., Hagerman, N. M.....
Alfalfa Meal.....	Penick & Ford, Cedar Rapids, Iowa.....
Douglas Corn Gluten Feed.....	Penick & Ford, Cedar Rapids, Iowa.....
Douglas Corn Oil Cake Meal.....	Penn Grains & Feed Co., Phila., Pa.....
"Peerless" Brewers' Dried Grains.....	M. C. Peters Mill Co., Omaha, Nebr.....
Ivanhoe Horse and Mule Feed.....	" " " " " ".....
King Corn Horse and Mule Feed.....	" " " " " ".....
Peters Arab Horse Feed.....	" " " " " ".....
Peters Economy Alfalfa and Molasses Feed	" " " " " ".....
Rabbit Mule Feed.....	" " " " " ".....
*Red Feather Crate Fattener.....	" " " " " ".....
Red Feather Laying Mash with Buttermilk	" " " " " ".....
Sell-A-Gen Horse Feed.....	Pfeffer Milling Co., Lebanon, Ill.....
Middlings.....	Phoenix Flour Mills, Davenport, Iowa.....
Wheat Stand. Middlings, with M. R. S.....	P'd by Hayward & Co., Balto., Md.....
Dairy Ration.....	Pillsbury Flour Mills Co., Minneapolis, Minn.....
Hard Wheat Bran Screenings.....	" " " " " ".....
Hard Wheat Stand. B. Midds. & Screenings	" " " " " ".....
Palisade Scratch Feed.....	" " " " " ".....
Scratch Feed.....	" " " " " ".....
XX Daisy.....	Pratt Food Co., Phila., Pa.....
Baby Chick Food, with B. M.....	" " " " " ".....
Circle (A) Scratch Feed (Large Size)....	" " " " " ".....
Supreme Chick Scratch Feed.....	" " " " " ".....

* One star means deficient in Protein or Fat.

** Two stars mean deficient in both Protein and Fat.

Place Collected	Moisture	Protein		Fat		Fiber		Ash	Nitrogen Free Extract
		FOUND	Guaranteed	FOUND	Guaranteed	FOUND	Guaranteed		
Denton	11.60	15.97	16.00	5.20	4.50	5.50	5.00	6.47	55.26
Denton	11.20	16.23	16.00	4.70	4.50	3.60	5.00	5.75	53.52
Denton	11.35	20.80	20.00	5.60	5.00	8.25	7.00	9.45	44.55
Denton	10.50	20.45	20.00	5.75	5.00	7.10	7.00	8.00	48.20
Denton	.....	10.27	10.00	2.50	4.00	2.70	4.50	2.02	.....
Denton	12.15	9.92	10.00	3.43	4.00	3.40	4.50	1.71	69.39
Baltimore	8.63	16.50	15.00	3.88	4.00	12.73	12.00	7.24	51.02
Baltimore	10.85	15.71	15.00	3.83	4.00	13.80	12.00	7.33	48.48
Baltimore	11.90	17.68	15.00	3.25	4.00	7.70	12.00	8.87	50.60
Baltimore	11.05	10.23	11.00	2.28	3.00	2.87	3.00	1.43	72.14
Baltimore	12.40	11.06	10.00	1.35	3.00	2.45	6.00	1.66	71.08
Baltimore	9.93	11.15	15.00	3.43	3.00	14.15	12.00	6.68	54.66
Baltimore	9.50	23.21	24.00	4.00	5.00	9.55	12.00	6.61	47.13
Baltimore	11.62	10.87	9.00	3.42	1.00	7.74	15.00	3.96	62.39
Baltimore	9.18	25.10	24.00	5.50	6.00	10.35	11.00	9.57	40.30
Baltimore	10.60	22.99	24.00	5.05	6.00	10.75	11.00	7.89	42.72
Baltimore	10.55	10.62	9.00	3.35	3.00	2.93	6.00	2.12	70.43
Baltimore	10.83	10.62	10.00	2.20	3.00	2.35	4.00	1.60	72.40
Baltimore	12.88	10.09	10.00	1.37	3.00	1.75	4.00	1.12	72.79
Baltimore	11.78	12.72	12.00	3.80	3.00	3.33	3.00	3.22	65.15
Baltimore	12.30	15.18	10.00	3.60	1.50	4.24	8.00	7.88	56.80
Baltimore	13.43	10.97	10.00	2.73	1.50	2.50	5.00	1.44	68.93
Baltimore	11.33	19.22	18.00	4.35	1.50	5.30	12.00	9.57	50.23
Baltimore	12.08	10.27	10.00	3.13	1.50	2.80	5.00	1.37	70.35
Baltimore	12.83	10.53	10.00	3.33	1.50	3.15	5.00	1.74	68.72
Baltimore	11.37	17.99	12.00	2.15	1.50	21.35	35.00	10.53	36.61
Baltimore	10.38	24.75	23.00	2.65	1.00	7.00	8.00	5.07	50.15
Baltimore	9.68	21.85	18.00	10.70	8.00	8.85	10.50	2.57	46.35
Taneytown	7.20	21.50	20.00	5.70	5.00	15.68	17.00	3.78	46.14
Baltimore	12.80	10.53	9.00	2.84	3.00	8.62	8.00	3.78	61.43
Baltimore	14.45	9.88	10.00	2.18	1.50	9.42	15.00	4.92	59.15
Baltimore	12.35	10.65	10.00	2.71	2.00	9.18	15.00	4.56	60.55
Baltimore	16.40	10.37	10.00	1.12	.50	16.45	26.00	8.32	47.34
Baltimore	15.40	9.56	10.00	2.05	1.50	10.55	15.00	4.95	57.49
Baltimore	11.43	14.30	13.00	4.50	6.00	5.15	10.00	2.82	61.80
Cumberland	10.50	21.94	20.00	3.90	4.00	4.68	8.00	6.64	52.34
Baltimore	10.50	12.16	10.00	2.64	1.50	11.85	16.00	5.84	56.45
Emmitsburg	10.08	16.94	17.50	4.80	5.00	6.50	7.50	4.32	57.36
Berlin	11.60	16.28	14.00	4.10	4.00	7.60	9.50	.....	.....
Frostburg	10.00	21.67	20.00	5.25	4.00	8.85	11.00	8.72	45.51
Laurel	11.18	14.30	14.00	5.53	4.00	9.68	12.00	5.60	53.71
Sykesville	12.50	15.97	15.00	4.55	4.00	7.30	9.50	4.58	55.10
Glyndon	.....	10.35	10.00	2.80	2.50	2.70	5.00	1.49	.....
Frostburg	11.95	10.79	10.00	3.10	2.50	2.70	5.00	1.53	69.93
Baltimore	11.83	20.19	16.00	4.20	4.00	2.23	4.00	3.22	58.33
Silver Springs	10.28	14.56	11.50	3.53	3.50	3.10	3.80	4.51	64.02
Baltimore	12.80	10.62	10.00	3.38	2.50	2.90	5.00	1.75	68.55
Baltimore	10.80	12.38	10.00	2.95	2.50	1.50	5.00	1.60	70.77

Minn.

"

"

"

"

"

"

"

"

"

"

"

"

"

"

"

"

"

"

Name of Feed	Name of Manufacturer	
Supreme Dairy Ration.....	Pratt Food Co., Phila., Pa.—Cont.....	Baltimo
Supreme Growing Mash, with B. M.....	" " " " " ".....	Baltimo
Supreme Intermediate Scratch Feed.....	" " " " " ".....	Baltimo
Supreme Laying Mash, with B. M.....	" " " " " ".....	Baltimo
Supreme Scratch Feed (Large Size).....	" " " " " ".....	Baltimo
Victory Chick Scratch Feed.....	" " " " " ".....	Baltimo
Victory Laying Mash, with B. M.....	" " " " " ".....	Baltimo
Victory Scratch (Large Size).....	Preston Feed & Supply Co., Preston, Md....	Preston
Rieck's Supreme Laying Mash.....	Purity Oat Co., Chicago, Ill.....	Greenst
Purity Oat Feed.....	Quaker City Flour Mills Co., Phila., Pa.....	Sudlers
Bran.....	Quaker Oats Co., Chicago, Ill.....	Owings
*Big Egg (No Grit).....	" " " " " ".....	Owings
Big Q Dairy Ration.....	" " " " " ".....	Ellicott
Buckeye Feed.....	" " " " " ".....	Baltimo
Ful-O-Pep Coarse Chick Feed.....	" " " " " ".....	Baltimo
Ful-O-Pep Dry Mash Laying Grade.....	" " " " " ".....	Baltimo
Ful-O-Pep Fine Chick Feed.....	" " " " " ".....	Baltimo
Ful-O-Pep Growing Mash.....	" " " " " ".....	Baltimo
Ful-O-Pep Scratch Grains.....	" " " " " ".....	Baltimo
Green Cross Horse Feed.....	" " " " " ".....	Beltsvill
Quaker Dairy Feed, with Molasses.....	" " " " " ".....	Baltimo
Schumacher Calf Meal.....	" " " " " ".....	Rockvill
Schumacher Feed.....	" " " " " ".....	Baltimo
Schumacher Little Chick Feed.....	" " " " " ".....	Rockvill
Schumacher Scratch Grains.....	" " " " " ".....	Beltsvill
Schumacher Scratch Grains (Hen Size)...	" " " " " ".....	Rockvill
Sugared Schumacher Feed.....	" " " " " ".....	Baltimo
Vim Feed.....	" " " " " ".....	Baltimo
Yellow Hominy Feed.....	" " " " " ".....	New W
Protana Dairy Feed.....	Ralston Purina Co., St. Louis, Mo.....	Church
Purina Baby Chick Chow.....	" " " " " ".....	Baltimo
Purina Calf Chow Feed.....	" " " " " ".....	Baltimo
Purina Chicken Chowder, not over 1% Charcoal	" " " " " ".....	Church
Purina Chicken Chowder, not over 1% Charcoal	" " " " " ".....	Gaithers
Purina Chicken Chowder, not over 1% Charcoal	" " " " " ".....	Baltimo
*Purina Chicken Fatena Feed.....	" " " " " ".....	Baltimo
Purina Chick Startena, with Buttermilk.....	" " " " " ".....	Berlin
Purina Cow Chow Feed 24%.....	" " " " " ".....	Baltimo
Purina Hen Chow.....	" " " " " ".....	Baltimo
Purina O Molene.....	" " " " " ".....	Berlin
Purina Pig Chow Feed, not over 1% Charcoal...	Reckord Manufacturing Co., Bel Air, Md.....	Bel Air
Bran.....	Reckord Manufacturing Co., Bel Air, Md.....	Bel Air
Middlings.....	Reindollar Bros. & Co., Taneytown, Md.....	Taneytov
Rein-o-la Chick Feed.....	Reindollar Bros. & Co., Taneytown, Md.....	Taneytov
*Rein-o-la Laying Mash.....	Reindollar Co., Taneytown, Md.....	Taneytov
Bran.....	Reindollar Co., Taneytown, Md.....	Taneytov
Middlings.....	Daniel Rider, Balto., Md.....	Baltimo
Winner Horse Feed.....	Rosenbaum Bros., Chicago, Ill.....	Denton
Advance Chick Scratch (No Grit).....		

*One star means deficient in Protein or Fat.

FEED STUFF ANALYSIS

45

Place Collected	Moisture	Protein		Fat		Fiber		Ash	Nitrogen Free Extract
		FOUND	Guaranteed	FOUND	Guaranteed	FOUND	Guaranteed		
Baltimore	11.05	20.45	20.00	4.48	4.00	7.80	10.50	5.41	50.81
Baltimore	11.00	17.72	17.50	4.50	4.50	4.95	7.00	9.57	52.26
Baltimore	12.13	11.32	10.00	2.60	2.50	2.00	5.00	1.54	70.41
Baltimore	10.43	20.97	20.00	4.15	4.00	6.20	9.00	8.37	49.88
Baltimore	12.25	11.41	10.00	2.95	2.50	3.10	5.00	1.70	68.59
Baltimore	11.93	10.88	10.00	2.73	2.50	1.80	5.00	1.33	71.33
Baltimore	11.55	17.55	17.00	4.28	4.00	6.27	9.00	...	...
Baltimore	12.58	10.44	10.00	2.83	2.50	2.53	5.00	1.63	59.99
Preston	10.13	22.38	20.00	5.68	5.00	5.60	8.00	10.92	45.29
Greensboro	7.23	7.20	5.00	2.05	1.50	28.83	30.00	7.09	47.60
Sudlersville	10.87	15.75	13.00	4.35	3.00	8.15	10.50	6.63	54.30
Owings Mills	11.60	8.78	9.00	1.35	2.00	1.75	5.00	.99	75.53
Owings Mills	11.40	21.32	21.00	4.70	4.50	11.13	12.00	5.45	46.00
Ellicott City	7.41	17.38	15.50	4.38	4.50	7.58	11.00	6.53	56.72
Baltimore	11.73	10.35	10.00	2.10	2.00	1.75	5.00	1.36	72.71
Baltimore	8.45	21.67	20.00	5.30	4.00	7.63	10.00	9.14	47.81
Baltimore	10.88	11.85	10.00	3.58	3.00	1.08	2.50	1.06	71.55
Baltimore	9.88	19.88	17.00	6.05	5.25	5.00	9.00	8.29	50.90
Baltimore	11.85	10.53	10.00	2.08	2.50	1.83	5.00	3.22	70.49
Beltsville	11.08	10.53	10.00	2.64	2.50	9.88	12.00	4.82	61.05
Baltimore	9.22	21.93	16.00	5.56	4.50	11.79	16.00	6.04	45.46
Rockville	8.60	19.74	18.00	8.05	8.00	2.35	4.00	8.60	52.66
Baltimore	9.45	10.35	10.00	3.00	3.25	10.40	12.00	3.65	63.15
Rockville	11.25	10.79	9.00	1.83	2.00	1.48	3.00	1.79	72.86
Beltsville	17.35	10.00	9.00	2.10	2.00	2.25	5.00	1.25	67.05
Rockville	10.48	9.65	9.00	1.78	2.00	2.25	5.00	1.50	74.34
Baltimore	8.85	9.92	10.00	3.63	3.25	11.03	12.00	3.92	62.65
Baltimore	6.80	5.27	5.00	2.00	2.00	27.65	28.00	6.17	52.11
New Windsor	9.60	11.06	10.50	4.70	5.00	4.20	6.00	2.53	67.91
Church Hill	4.36	18.21	16.50	4.03	3.50	13.60	12.00	7.32	52.48
Baltimore	12.25	10.44	10.00	2.60	2.00	1.93	4.00	1.40	71.38
Baltimore	8.87	27.29	27.00	3.53	3.20	5.10	4.50	4.00	51.21
Baltimore	11.40	19.22	19.00	4.70	4.00	9.68	9.00	...	...
Church Hill	10.20	21.81	19.00	4.33	4.00	8.63	9.00	7.49	47.54
Gaithersburg	10.45	19.92	19.00	4.55	4.00	8.30	9.00	7.46	49.32
Baltimore	8.12	15.63	12.00	5.47	6.00	7.40	8.00	3.19	60.19
Baltimore	11.63	19.84	17.00	5.00	4.00	7.80	7.50	6.67	49.06
Berlin	12.30	23.71	24.00	4.40	4.30	8.57	12.00	5.64	45.38
Baltimore	13.18	10.53	10.00	3.45	2.50	3.33	4.00	1.53	67.98
Baltimore	10.68	10.58	9.70	3.70	3.20	7.42	8.00	4.05	63.57
Berlin	11.95	20.13	20.00	3.52	3.20	6.68	8.00	7.57	50.15
Bel Air	...	15.18	14.00	4.25	3.50	7.50	10.00	7.00	...
Bel Air	...	16.85	15.00	4.60	3.50	4.35	5.00	4.93	...
Taneytown	10.43	9.88	10.00	3.78	4.00	2.00	3.00	1.95	71.96
Taneytown	11.33	19.93	22.00	4.35	4.50	6.60	8.00	7.92	49.87
Taneytown	10.83	16.80	14.00	4.83	3.00	8.25	14.00	5.96	53.33
Taneytown	11.75	17.72	17.50	4.45	4.50	3.05	5.00	3.37	59.66
Baltimore	9.85	9.62	9.00	3.82	2.00	7.98	14.00	3.40	65.33
Denton	13.38	10.27	10.00	3.90	2.00	1.78	5.00	1.87	68.80

1923—Complete Analyses of Feeds Collected—1923—Continued.

Name of Feed	Name of Manufacturer
Advance Dairy Feed.....	Rosenbaum Bros., Chicago, Ill.—Cont.....
Advance Horse Feed.....	" " " "
Four-O-Clock Scratch.....	" " " "
77 Chick Scratch.....	" " " "
Vitality Chick Starter.....	" " " "
*Vitality Coarse Chick Scratch.....	" " " "
*Vitality Fine Chick Scratch.....	" " " "
Vitality Egg Mash.....	" " " "
Vitality Growing Mash.....	" " " "
Vitality Horse Feed.....	" " " "
Vitality Scratch Feed.....	" " " "
Will-Pay Dairy Ration.....	" " " "
Wheat Bran	Rowlandville Flour Mills, Rowlandville, Md.
Wheat Middlings	Rowlandville Flour Mills, Rowlandville, Md.
*Bran	M. V. Rumkles, Mt. Airy, Md.....
Atlas Hard Wheat Middlings, N. Ex. M. R. of Screenings	Russell-Miller Milling Co., Minneapolis, Minn.
Bran (Made from Pure Wheat).....	Russell-Miller Milling Co., Minneapolis, Minn.
Bran	St. Michaels Milling Co., St. Michaels, Md...
Middlings	St. Michaels Milling Co., St. Michaels, Md...
Oriole Brand Beef Scrap.....	Wm. G. Scarlett & Co., Balto., Md.....
Oriole Brand Beef Scrap.....	" " " "
Oriole Brand AA Pigeon Feed.....	" " " "
*Oriole Brand AA Pigeon Feed.....	" " " "
Oriole Brand AA Pigeon Feed.....	" " " "
*Oriole Brand AAA Pigeon Feed.....	" " " "
Oriole Brand AAA Pigeon Feed.....	" " " "
Oriole Brand Chick Developer.....	" " " "
*Oriole Brand Chick Starter.....	" " " "
Oriole Brand Chick Starter.....	" " " "
Oriole Brand Dry Mash.....	" " " "
Oriole Brand Dry Mash.....	" " " "
Oriole Brand Spec. Pigeon Feed.....	" " " "
*Oriole Brand Spec. Pigeon Feed.....	" " " "
Oriole Brand Scratch Feed.....	" " " "
Oriole Brand Scratch Feed.....	" " " "
Millbourne Bran	Shane Bros. & Wilson Co., Phila., Pa.....
Millbourne Flour Middlings, with Gr'd Screen., N. Ex. M. R.....	" " " "
Millbourne Flour Middlings, with Gr'd Screen., N. Ex. M. R.....	" " " "
Haskell's Stock Feed.....	Sheets Elevator Co., Cleveland, Ohio.....
Meat Mash Great Egg Maker.....	" " " "
S. B. Alfalfa Horse Feed.....	" " " "
Wheat Bran	Sherwood Roller Mills, Sandy Spring, Md.
Wheat Middlings	Sherwood Roller Mills, Sandy Spring, Md.
*Wasco Brand B. M. Chick Starter.....	W. A. Simpson Co., Balto., Md.....
Wasco Brand B. M. Laying Mash.....	" " " "
*Wasco Brand B. M. Laying Mash.....	" " " "

* One star means deficient in Protein or Fat.

FEED STUFF ANALYSIS

47

Place Collected	Moisture	Protein		Fat		Fiber		Ash	Nitrogen Free Extract
		FOUND	Guaranteed	FOUND	Guaranteed	FOUND	Guaranteed		
Baltimore	7.50	16.12	16.00	3.50	3.50	9.87	14.00	6.66	56.35
Baltimore	7.05	10.80	10.00	2.87	2.00	12.68	15.00	5.52	61.08
Baltimore	11.78	10.00	10.00	3.30	2.75	3.20	3.00	1.30	74.42
Rising Sun	12.95	10.71	10.00	3.40	2.00	2.20	5.00	1.84	68.90
Denton	11.60	15.97	15.00	4.75	5.00	5.18	5.00	8.78	53.72
Rising Sun	12.70	10.53	10.00	3.05	5.00	2.60	3.00	1.27	69.85
Baltimore	10.70	11.58	10.00	4.37	5.00	1.75	3.00	1.63	69.97
Denton	11.80	20.01	20.00	4.45	4.00	5.13	7.00	6.86	51.75
Rising Sun	11.10	21.68	15.00	4.58	5.00	5.73	6.00	8.61	48.30
Baltimore	8.25	10.57	10.00	2.20	2.00	14.40	15.00	5.55	59.03
Rising Sun	12.60	10.71	10.00	3.55	2.50	3.15	5.00	1.60	68.39
Baltimore	11.00	22.82	20.00	4.55	5.00	7.45	9.00	5.67	48.51
Rowlandville	10.83	14.30	14.00	4.28	4.00	8.90	10.00	....	....
Rowlandville	11.70	16.67	16.00	4.05	4.00	4.08	5.00	....	....
Mt. Airy	9.45	16.06	14.00	4.15	5.00	9.00	10.00	5.96	55.38
Baltimore	12.15	16.50	15.50	5.00	4.50	7.15	8.50	4.67	54.53
Preston	10.53	16.06	13.00	6.00	4.00	10.03	11.00	7.28	50.10
St. Michaels .....	....	13.51	14.00	4.03	4.00	9.10	11.00	6.12	....
St. Michaels	12.00	14.39	14.50	3.90	4.00	3.63	5.00	3.36	62.72
Baltimore	7.38	52.33	50.00	11.60	12.00	2.00	1.00	26.65	.04
Baltimore	8.05	49.49	50.00	12.13	12.00	1.75	1.00	28.58	0.00
Baltimore	12.20	14.04	13.00	3.40	3.50	2.73	4.00	1.94	65.69
Baltimore	11.77	12.20	13.00	2.80	3.50	3.55	4.00	1.84	67.84
Baltimore	11.90	12.99	13.00	3.13	3.50	3.45	4.00	1.96	66.57
Baltimore	12.38	14.09	16.00	4.00	3.00	4.88	4.00	1.87	62.78
Baltimore	12.10	16.06	16.00	3.68	3.00	4.50	4.00	1.82	61.84
Baltimore	11.68	10.62	10.00	3.30	3.00	2.20	3.00	1.99	70.21
Baltimore	11.35	10.09	10.50	2.65	3.70	1.63	3.00	1.74	72.54
Baltimore	11.38	10.53	10.60	3.20	3.70	2.03	3.00	2.00	70.86
Baltimore	9.20	21.67	20.00	4.65	4.00	9.70	11.00	8.72	46.06
Baltimore	11.40	22.11	20.00	4.35	4.00	8.75	11.00	8.32	45.07
Baltimore	12.43	15.97	16.00	3.00	3.00	5.18	4.00	2.19	61.23
Baltimore	12.23	13.82	16.00	3.23	3.00	3.95	4.00	2.01	64.76
Baltimore	11.30	11.23	10.50	3.65	3.50	3.80	4.00	1.63	68.39
Baltimore	11.90	10.97	10.50	3.10	3.50	2.83	4.00	....	....
Millington .....	....	15.62	15.00	4.50	4.00	8.75	8.00	7.18	....
Ridgely	12.28	14.44	15.00	2.59	4.00	2.73	8.00	3.56	64.40
Kennedyville	12.13	16.32	15.00	4.10	4.00	4.48	8.00	3.51	59.56
Hagerstown	9.25	10.18	9.00	5.60	6.00	6.43	9.00	4.05	64.49
Hagerstown	9.88	19.84	15.00	5.93	4.00	6.55	8.00	6.61	51.19
Hagerstown	12.75	10.12	10.00	3.15	2.50	11.20	14.80	4.90	57.88
Sandy Spring	11.80	14.92	14.00	4.25	4.00	8.00	10.00	6.10	54.93
Sandy Spring	10.90	17.72	15.00	4.18	4.00	3.60	6.00	3.65	59.95
Baltimore	11.90	16.98	18.00	4.60	3.00	8.38	7.00	1.59	56.55
Baltimore	10.30	19.04	20.00	4.60	2.50	8.35	8.00	7.09	50.62
Baltimore	12.05	18.74	20.00	4.83	2.50	8.53	8.00	6.46	49.39

1923—Complete Analyses of Feeds Collected—1923—Continued.

Name of Feed	Name of Manufacturer
*Wasco Brand B. M. Growing Mash.....	W. A. Simpson Co., Balto., Md.—Cont.
Wasco Brand B. M. Growing Mash.....	" " " " " "
*Wasco Brand Chick Developer.....	" " " " " "
Wasco Brand Chick Developer.....	" " " " " "
Wasco Brand Chick Feed.....	" " " " " "
*Wasco Brand 55 Meat Scrap.....	" " " " " "
*Wasco Brand 55 Meat Scrap.....	" " " " " "
Wasco Brand 45 Meat Scrap.....	" " " " " "
Wasco Brand Pigeon Feed No. 1.....	" " " " " "
Wasco Brand Pigeon Feed No. 1.....	" " " " " "
Wasco Brand Scratch Feed.....	" " " " " "
Wasco Brand Scratch Feed.....	" " " " " "
Bran	D. P. Smelser & Son, New Windsor, Md.
Middlings	D. P. Smelser & Son, New Windsor, Md.
Chop Feed	Soyco Mills Co., Greenville, Ohio.....
Kellogg's Pure Old Process Oil Meal.....	Spencer Kellogg & Sons, Inc., Buffalo, N. Y.
Pure Old Process Oil Meal.....	Spencer Kellogg & Sons, Inc., Buffalo, N. Y.
Corn Gluten Feed.....	A. E. Staley Mfg. Co., Decatur, Ill.....
Corn and Oat Chop.....	Standard Milling Co., Clarksburg, W. Va.....
Corn, Oats and Barley Chop.....	Standard Milling Co., Clarksburg, W. Va.....
*Middlings	Standard Milling Co., Clarksburg, W. Va.....
*Star-Chic-A	Star Food & Remedy Co., Washington, D. C.
*Star Milk Mash.....	Star Food & Remedy Co., Washington, D. C.
*Star Scratch Feed.....	Star Food & Remedy Co., Washington, D. C.
Blue Ridge Chick Feed.....	D. A. Stickell & Sons, Hagerstown, Md.....
Blue Ridge Dairy Ration.....	" " " " " "
Blue Ridge Egg Mash.....	" " " " " "
Blue Ridge Egg Mash.....	" " " " " "
Blue Ridge Egg Mash.....	" " " " " "
Blue Ridge Scratch Grains.....	" " " " " "
Horse Feed 65%.....	" " " " " "
Horse Feed 65%.....	" " " " " "
Milk Ration 25%.....	" " " " " "
*Pure Soft Winter Bran.....	" " " " " "
Pure Soft Winter Bran.....	" " " " " "
Pure Soft Winter Bran.....	" " " " " "
Pure Soft Winter Middlings.....	" " " " " "
Pure Soft Winter Middlings.....	" " " " " "
Pure Soft Winter Middlings.....	" " " " " "
Victor Dairy Feed.....	" " " " " "
Victor Dairy Feed.....	" " " " " "
Victor Scratch Grains.....	" " " " " "
Victor Scratch Grains.....	" " " " " "
Victor Scratch Grains.....	" " " " " "
Stand. Shorts, with Gr'd Scr'gs N. Ex. M. R.	Stokes Milling Co., Watertown, S. D.....
Wheat Bran, with Gr'd Scr'gs N. Ex. M. R.	Stokes Milling Co., Watertown, S. D.....
Wheat Bran, with Corn Bran not over 1%	J. W. Story, Derwood, Md.....
Wheat Middlings	J. W. Story, Derwood, Md.....
Pure Ground Fish Meal.....	Chas. M. Struven & Co., Balto., Md.....

* One star means deficient in Protein or Fat.

FEED STUFF ANALYSIS

49

Place Collected	Moisture	Protein		Fat		Fiber		Ash	Nitrogen Free Extract
		FOUND	Guaranteed	FOUND	Guaranteed	FOUND	Guaranteed		
Baltimore	11.80	17.86	20.00	4.55	2.50	9.60	8.00	6.48	49.71
Baltimore	9.00	19.13	20.00	4.50	2.50	8.70	8.00	7.51	51.16
Baltimore	12.67	10.09	10.00	2.43	3.00	1.90	2.75	1.24	71.67
Baltimore	11.75	10.09	10.00	2.65	3.00	2.00	2.75	1.21	72.30
Baltimore	11.35	10.97	10.00	5.95	2.75	3.02	2.45	1.01	67.70
Baltimore	8.30	53.75	55.00	12.00	11.00	1.35	2.00	23.15	1.45
Baltimore	6.00	56.78	55.00	9.95	11.00	1.65	2.00	24.87	.75
Baltimore	6.70	48.62	45.00	13.60	11.00	1.80	3.00	26.61	2.67
Baltimore	11.50	11.67	10.00	3.75	4.00	3.75	2.00	1.94	67.39
Baltimore	12.18	12.68	10.00	3.55	4.00	.88	2.00	1.83	68.88
Baltimore	12.00	10.71	10.00	3.78	2.25	2.55	2.50	1.46	69.50
Baltimore	11.90	10.27	10.00	3.10	2.25	2.40	2.50	1.52	70.81
Md. New Windsor	10.53	16.41	14.00	4.65	4.00	8.08	10.63	5.87	54.46
Md. New Windsor	11.85	15.71	15.00	3.45	4.00	3.78	6.00	3.79	61.42
o, N. Y. Baltimore	12.08	10.00	10.00	3.25	2.50	10.58	10.00	3.36	60.73
o, N. Y. Walkersville	10.30	32.91	31.00	7.80	5.00	7.93	10.00	6.18	34.88
Cardova	9.05	35.54	35.00	6.90	5.00	8.15	10.00	5.24	35.12
Silver Springs	9.15	25.14	23.00	1.50	1.00	7.10	8.00	5.20	51.91
Oakland	12.80	11.72	9.20	4.10	4.00	4.53	3.60	2.53	64.32
Oakland	12.75	9.65	9.88	3.50	3.98	2.50	5.02	1.64	69.96
Oakland	12.62	15.45	14.75	3.60	4.40	4.45	8.00	3.39	60.49
Waldorf	11.00	19.97	17.00	4.38	5.00	3.40	3.00	...	...
Berwyn	10.88	21.85	20.00	5.19	6.00	6.15	7.00	8.41	47.52
Berwyn	12.75	10.62	10.00	2.90	4.00	2.85	3.00	...	...
Frederick	13.00	10.35	10.00	3.80	2.50	3.25	5.00	2.60	67.00
Westminster	9.83	21.67	21.00	4.78	4.50	10.68	13.00	7.28	45.76
Preston	11.03	18.25	18.00	4.65	4.00	10.20	12.00	10.71	45.16
Hagerstown	6.98	20.10	18.00	3.95	4.00	9.25	12.00	13.38	46.34
Hancock	10.10	18.95	18.00	4.85	4.00	9.90	12.00	9.95	46.25
Hagerstown	13.75	10.27	10.00	2.78	2.50	2.65	5.00	1.65	68.90
Hancock	10.00	10.01	9.00	2.58	2.00	9.75	12.00	4.22	63.44
Hagerstown	10.15	10.25	9.00	2.67	2.00	10.46	12.00	4.30	62.17
Hagerstown	10.33	25.89	25.00	5.35	5.50	9.00	10.00	6.94	42.49
Hagerstown	13.25	15.71	15.00	3.70	4.50	9.50	11.00	6.54	51.30
Preston	10.00	15.97	15.00	4.10	4.50	9.80	11.00	7.33	52.80
Hancock	9.78	15.62	15.00	4.53	4.50	8.85	11.00	6.17	55.05
Hancock	10.80	16.94	17.00	5.74	4.50	5.55	6.00	4.87	56.10
Preston	11.68	17.81	17.00	5.80	4.50	5.27	6.00	5.49	53.95
Hagerstown	11.75	17.55	17.00	5.28	4.50	5.85	6.00	5.31	54.26
Hagerstown	10.18	15.88	16.00	4.24	4.50	12.85	14.00	7.43	49.42
Hagerstown	8.50	17.46	16.00	4.85	4.50	14.25	14.00	8.03	75.41
Hancock	11.30	10.62	10.00	2.35	2.50	3.00	5.00	1.65	71.08
Preston	11.15	10.35	10.00	3.30	2.50	2.80	5.00	2.18	70.22
Frederick	13.90	9.92	10.00	2.43	2.50	2.65	5.00	1.63	69.47
Cumberland	11.75	16.50	16.10	5.60	4.90	7.35	7.10	5.51	53.29
Cumberland	13.25	14.30	14.10	4.40	4.50	9.62	12.30	6.04	52.39
Derwood	11.55	13.86	14.00	3.83	4.00	9.60	9.00	5.47	55.69
Derwood	12.20	15.01	15.00	3.55	4.00	3.75	5.00	3.39	62.10
Havre de Grace	8.20	55.02	55.00	8.20	4.00	.75	2.00	17.54	10.29

1923—Complete Analyses of Feeds Collected—1923—Continued.

Name of Feed	Name of Manufacturer
*Buttermilk Egg Mash.....	Sugarine Co., Inc., Owensboro, Ky.....
*Chick Starter	" " " " " "
National Dairy Ration.....	" " " " " "
Record Chick Feed.....	" " " " " "
Universal Scratch Feed.....	" " " " " "
Laymore Beef Scraps.....	Swift & Co., Chicago, Ill.....
Meat and Bone Scraps.....	Swift & Co., Chicago, Ill.....
Meat and Bone Scraps.....	Swift & Co., Chicago, Ill.....
Tankage (Feeding)	Taneytown Reduction Plant, Taneytown, Md.....
*Corn and Oat Chops	Thomas & Co., Frederick, Md.....
*Dairy Feed 16 1/2	" " " " " "
*Dairy Feed 16 1/2	" " " " " "
*Dairy Feed 16 1/2	" " " " " "
*Dairy Feed 16 1/2	" " " " " "
*Dairy Feed 16 1/2	" " " " " "
*Dairy Feed 16 1/2	" " " " " "
*Dairy Feed 16 1/2	" " " " " "
*Dairy Feed 16 1/2	" " " " " "
*Dairy Feed 16 1/2	" " " " " "
*Victory Feed	" " " " " "
*Victory Feed	" " " " " "
*Camp's Cloverdale Dairy Ration.....	Toledo Grain & Milling Co., Toledo, Ohio.....
*Camp's C. O. & B. Chop Feed.....	" " " " " "
Camp's Flaked Corn & Oats.....	" " " " " "
Camp's Invincible Alfalfa Feed.....	" " " " " "
*Camp's Red Ball Egg Mash.....	" " " " " "
Camp's Red Ball Scratch Feed.....	" " " " " "
Camp's Surprise Chop Feed.....	" " " " " "
Trifalfa Meal	Triangle Milling Co., North Kansas City, Mo.....
Buttermilk Starting Mash.....	Ubiko Milling Co., Cincinnati, Ohio.....
Chick Feed	" " " " " "
Dried Beet Pulp	" " " " " "
Egg Mash, with Buttermilk.....	" " " " " "
Growing Mash, with Buttermilk.....	" " " " " "
Gypsy Horse Feed.....	" " " " " "
Intermediate Scratch Feed.....	" " " " " "
Scratch Feed (No Grit).....	" " " " " "
Sunbeam Dairy Ration.....	" " " " " "
Union Grains Biles Ready Dairy Ration.....	" " " " " "
Wildcat Scratch Feed (No Grit).....	" " " " " "
Pure Ground Meat Scraps.....	Van Iderstine Co., Long Island City, N. Y.....
Vico Quality Meat Scraps.....	Van Iderstine Co., Long Island City, N. Y.....
*Vico Quality Meat Scraps.....	Van Iderstine Co., Long Island City, N. Y.....
Durum Wheat Bran, with Cleaned Gr'd Wheat Screenings.....	Washburn Crosby Co., Minneapolis, Minn.....
Eventually Gold Medal Chick Feed.....	" " " " " "

* One star means deficient in Protein or Fat.

** Two stars mean deficient in both Protein and Fat.

PL
Coll

Baltimore
Baltimore
Baltimore
Baltimore
Baltimore
Walkers
Walkers
Frederic
Taneytown
Frederic
Frederic
Frederic
Frederic
Union Bridge
New Market
New Market
Sellman
New Market
Gaithersburg
Gaithersburg
Frederic
Baltimore
Oakland
Baltimore
Baltimore
Baltimore
Baltimore
Oakland
Preston
Baltimore
Baltimore
Baltimore
Baltimore
Baltimore
Baltimore
Baltimore
Baltimore
Baltimore
Baltimore
Baltimore
Baltimore
Chesapeake
Baltimore
Baltimore
Baltimore
Baltimore
Pikesville

FEED STUFF ANALYSIS

51

Place Collected	Moisture	Protein		Fat		Fiber		Ash	Nitrogen Free Extract
		FOUND	Guaranteed	FOUND	Guaranteed	FOUND	Guaranteed		
Baltimore	10.73	20.71	20.00	4.33	5.00	5.70	8.00	7.30	51.23
Baltimore	11.63	19.92	20.00	4.23	5.00	4.00	5.50	3.71	56.51
Baltimore	8.51	21.16	20.00	4.16	4.50	7.57	9.00	8.00	50.60
Baltimore	10.90	10.18	10.00	3.60	2.50	2.63	5.00	1.88	70.81
Baltimore	10.03	10.88	10.00	3.00	2.50	3.05	5.00	1.44	71.60
Walkersville	6.75	46.77	45.00	13.78	6.00	1.98	3.00	29.63	1.09
Walkersville	8.38	49.93	50.00	11.30	6.00	2.28	3.00	25.29	2.82
Frederick	7.80	49.93	50.00	10.75	6.00	2.80	3.00	28.60	.12
Taneytown	...	31.24	32.00	16.85	15.00	8.13	8.00	21.92	...
Frederick	8.93	7.68	8.00	2.23	3.00	17.70	20.00	6.51	56.95
Frederick	8.77	17.73	16.50	2.44	3.50	13.10	16.00	...	...
Frederick	9.25	18.08	16.50	2.42	3.50	12.68	16.00	5.75	51.27
Frederick	10.80	13.02	16.50	1.83	3.50	15.32	16.00	6.35	52.68
Union Bridge	9.20	9.18	16.50	1.84	3.50	15.97	16.00	5.02	58.79
New Market	9.61	10.58	16.50	2.13	3.50	15.35	16.00	6.00	56.33
New Market	12.06	8.09	16.50	1.97	3.50	14.88	16.00	6.12	56.88
Sellman	10.36	13.87	16.50	3.28	3.50	14.28	16.00	7.55	50.66
New Market	9.00	8.27	16.50	1.41	3.50	15.32	16.00	6.26	59.74
Gaithersburg	12.22	15.78	16.50	2.64	3.50	14.80	16.00	5.48	49.08
Gaithersburg	9.53	24.92	24.00	4.35	5.00	8.75	14.00	5.07	47.38
Frederick	8.50	23.43	24.00	4.38	5.00	9.80	14.00	5.41	48.48
Baltimore	10.68	17.31	20.00	4.50	5.00	10.04	9.00	...	...
Oakland	10.55	9.04	9.00	2.48	3.50	9.30	9.00	3.04	65.59
Baltimore	11.30	10.09	10.00	4.15	4.00	6.65	8.00	1.63	66.18
Baltimore	8.28	9.37	10.00	3.35	2.00	6.92	12.00	3.16	68.72
Baltimore	11.15	16.06	16.00	3.54	4.50	6.55	7.50	4.98	57.72
Baltimore	12.20	10.62	10.00	3.03	2.50	2.55	5.00	1.37	70.23
Oakland	9.98	8.60	9.00	3.05	3.50	13.53	9.00	4.50	60.34
Preston	8.73	14.83	14.00	1.35	1.50	32.42	30.00	8.91	33.76
Baltimore	11.15	16.37	14.00	4.78	4.00	4.60	4.00	9.75	53.35
Baltimore	13.25	10.71	10.00	2.35	2.50	1.50	5.00	1.28	70.91
Baltimore	9.80	10.09	8.00	.58	.50	18.53	20.00	3.21	57.79
Baltimore	9.85	21.59	20.00	4.20	4.00	5.23	6.00	11.25	47.88
Baltimore	11.05	18.17	15.00	4.25	4.00	3.50	6.00	11.01	52.02
Baltimore	10.15	10.04	10.00	3.44	3.00	5.50	10.00	2.27	68.60
Baltimore	11.90	10.00	10.00	2.75	2.50	2.10	5.00	2.00	71.25
Baltimore	12.63	10.62	10.00	3.73	2.50	3.35	5.00	1.74	67.93
Baltimore	9.90	20.71	20.00	4.18	3.00	9.80	10.00	6.26	49.15
Baltimore	9.68	24.48	24.00	5.00	5.00	7.95	10.00	6.61	46.28
Baltimore	12.40	9.48	10.00	2.40	2.50	2.13	5.00	1.86	71.73
Chestertown	5.58	46.95	45.00	13.55	5.00	2.33	3.00	28.59	3.00
Baltimore	6.10	52.30	50.00	13.15	5.00	3.43	3.00	25.02	...
Baltimore	6.70	48.09	50.00	12.60	5.00	1.90	3.00	29.15	1.56
Baltimore	11.85	13.43	13.00	6.03	4.00	12.35	14.00	5.29	51.05
Pikesville	12.73	10.97	10.00	2.80	2.50	2.45	5.00	1.27	69.78

1923—Complete Analyses of Feeds Collected—1923—Continued.

Name of Feed	Name of Manufacturer
Eventually Gold Medal Growing Mash, with B. M.	Washburn Crosby Co., Minneapolis, Minn.—Cont...
Eventually Gold Medal Pure Hard Wheat Adrian Red Dog	" " " " "
Eventually Gold Medal Hard Wht. Flour Midds.	" " " " "
Eventually Gold Medal Hard Wheat Bran.....	" " " " "
Eventually Gold Medal Hard Wheat Stand. Midds.	" " " " "
Eventually Gold Medal Scratch (No Grit).....	" " " " "
Eventually Gold Medal Vitamin Dairy Ration...	" " " " "
Foxhall Hog Feed.....	C. B. Watkins & Co., Balto., Md.....
*Foxhall Laying Mash.....	" " " " "
*Foxhall Laying Mash.....	" " " " "
*Rep Dairy Feed.....	Western Feed Mfrs., Inc., Chicago, Ill.....
Rep Scratch Feed.....	" " " " "
Sincerity Chick Mash.....	" " " " "
Sincerity Egg Mash.....	" " " " "
*Calumet Dairy Feed.....	Western Grain Products Co., Hammond, Ind.....
Calumet Laying Mash.....	" " " " "
Calumet Scratch Feed.....	" " " " "
Unity Dairy Ration.....	" " " " "
Planet Brand Cottonseed Meal.....	A. C. Westervelt & Co., Memphis, Tenn.....
*Planet Brand Cottonseed Meal.....	A. C. Westervelt & Co., Memphis, Tenn.....
Tankage	Westminster Hide & Tallow Co., Westminster, Md...
Meat and Bone Meal.....	Westminster Hide & Tallow Co., Westminster, Md...
Wheat Bran	Westover Mills, Westover, Md.....
*Wheat Middlings	Westover Mills, Westover, Md.....
Cremor Dairy Feed.....	Wilkins Rogers Milling Co., Washington, D. C.....
Grassy Mead Dairy Feed.....	" " " " "
Grassy Mead Dairy Feed.....	" " " " "
Pure Wheat Middlings.....	" " " " "
Pure Wheat Bran.....	Wisconsin Milling Co., Menomonie, Wis.....

* One star means deficient in Protein or Fat.

** Two stars mean deficient in both Protein and Fat.

FEED STUFF ANALYSIS

53

Place Collected	Moisture	Protein		Fat		Fiber		Ash	Nitrogen Free Extract
		FOUND	Guaranteed	FOUND	Guaranteed	FOUND	Guaranteed		
-Cont... Pikesville	10.80	17.90	18.00	5.00	4.00	6.45	8.00	8.35	51.50
Pikesville	11.00	16.94	16.00	4.70	4.00	2.33	4.00	3.10	61.93
Owings Mills ..	10.95	16.76	16.00	5.33	4.00	6.05	6.00	3.70	57.21
Baltimore	10.35	15.71	14.00	5.48	4.00	9.75	12.00	.....	.....
Pikesville	11.35	16.06	15.00	5.80	4.00	6.02	9.50	4.53	56.24
Pikesville	12.48	11.76	10.00	3.05	3.00	2.40	4.00	2.01	68.30
Pikesville	11.20	20.53	20.00	5.08	5.00	6.13	8.50	.....	.....
Baltimore	10.80	15.97	15.25	4.60	2.98	8.60	7.33	5.38	54.65
Baltimore	10.95	18.30	20.13	5.30	4.85	7.80	7.10	6.88	50.77
Baltimore	9.90	18.12	20.13	4.95	4.85	7.48	7.10	7.56	51.99
Oakland	10.50	13.10	16.00	3.46	4.00	14.11	12.00	.....	.....
Baltimore	12.98	10.62	10.00	3.40	3.00	2.45	5.00	1.55	69.00
Cumberland	8.13	18.16	16.00	3.70	4.00	7.33	6.00	8.92	53.76
Cumberland	9.80	19.22	18.00	4.00	4.00	7.78	8.00	10.17	49.03
Hampstead	11.15	24.13	20.00	3.15	4.00	9.17	13.50	4.74	47.66
Hampstead	11.25	20.62	19.00	4.35	4.00	7.80	10.00	7.18	48.80
Hampstead	11.35	10.97	10.00	3.70	2.50	2.85	5.00	1.42	69.71
Hampstead	10.75	25.62	24.00	5.30	5.00	7.20	10.00	5.39	45.74
Denton	8.65	43.18	43.00	6.90	6.00	8.48	10.00	6.76	26.03
Chestertown	7.30	40.64	43.00	6.98	6.00	11.95	10.00	6.18	26.95
Westminster	5.08	44.89	45.00	22.50	5.00	2.52	2.50	17.88	7.13
Westminster	7.45	54.63	50.00	14.45	5.00	3.80	4.00	19.58	.09
Westover	10.78	14.92	14.50	3.55	3.50	9.15	10.00	7.52	54.08
Westover	13.63	12.56	14.00	3.48	4.00	3.03	5.00	.....	.....
Laurel	10.13	20.71	20.00	5.18	5.00	9.68	9.00	5.55	54.30
Gaithersburg	10.45	25.71	26.00	5.20	5.00	8.55	9.00	5.78	44.31
Germantown	9.30	26.06	26.00	5.25	5.00	8.83	9.00	5.96	44.60
Dickerson	11.13	16.67	16.00	4.70	4.00	4.50	6.00	3.58	59.42
Rising Sun	10.85	15.09	13.75	5.38	4.25	9.80	11.00	5.56	53.32